

**BETWEEN SPECIES:  
CHOREOGRAPHING HUMAN AND NONHUMAN BODIES**

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## **Abstract**

**BETWEEN SPECIES: CHOREOGRAPHING HUMAN AND NONHUMAN BODIES** is a dissertation project informed by practice-led and practice-based modes of engagement, which approaches the space of the zoo as a multispecies, choreographic, affective assemblage. Drawing from critical scholarship in dance literature, zoo studies, human-animal studies, posthuman philosophy, and experiential/somatic field studies, this work utilizes choreographic engagement, with the topography and inhabitants of the Toronto Zoo and the Berlin Zoologischer Garten, to investigate the potential for kinaesthetic exchanges between human and nonhuman subjects. In tracing these exchanges, **BETWEEN SPECIES** documents the creation of the zoomorphic choreographic works *ARK* and *ARCHE* and creatively mediates on: more-than-human choreography; the curatorial paradigms, embodied practices, and forms of zoological gardens; the staging of human and nonhuman bodies and bodies of knowledge; the resonances and dissonances between ethological research and dance ethnography; and, the anthropocentric constitution of the field of dance studies.

## **Dedication**

Dedicated to the glowing memory of my nana, Patricia Maltby, who, through her relentless love and fervent belief in my potential, elegantly willed me into another phase of life, while she passed, with dignity and calm, into another realm of existence.

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## OVERVIEW

*BETWEEN SPECIES: CHOREOGRAPHING HUMAN AND NONHUMAN BODIES* is a dissertation project that was originally envisioned as an examination of the choreographic aspects of zoos and the asymmetric human and animal kinetic relations that unfold within them. It slowly transformed into a more creatively-informed project constellating around two related, but distinct, choreographic projects informed by experiential/ethnographic modes of research conducted at zoos and theoretical ideas from dance studies, zoo studies, human-animal studies, posthuman philosophy, media studies, and semiotics. Due to the transformation of this project from a more conventional academic study with an artistic component, to one heavily focused and indebted to artistic creation as a means of engagement and a form of knowledge creation, this dissertation veers slightly away from a conventional dissertation format. The choreographic works created during this process are not positioned as beginnings or end points for thought and conversation, but instead, are situated as a midway point between two different “ways of seeing” animals, bodies, zoos, and artistic and academic practices.

The choreographic works *ARK* (Osborn and Baskerville 2018a) and *ARCHE* (Osborn and Baskerville 2018b) were the means to engage with zoos in a manner that departed from conventional ways of understanding them and portals leading to new ways of thinking about them. They were also the means to depart from conventional modes of framing interactions between humans and animals and portals to new understandings about lived human-animal relationships. Finally, they were opportunities to depart from conventional Western modes of structuring, creating, and performing dance, and portals to new ways of thinking about contemporary dance, choreographer-dancer relationships, and movement as a way of knowing.

Because of these transitions, this dissertation utilizes a semi-autoethnographic/semi-chronological form of organization that situates the researcher, accounts for social influences and experiences that informed the project, outlines the artistic and intellectual forces that propelled the work, explains the conceptualization and creation of the choreographic works, and presents, not only the artistic outcomes of this process, but the application of the ideas generated from extended engagement with the space of zoos, the bodies of animals, and the act of creating dance.

This mode of presentation is aligned with aspects of both *practice-led* and *practice-based* research. Although scholars such as Linda Candy make distinctions between the two modes (2006), in *Creative Practice as Research: Discourse on Methodology* (2018), R. Lyne Skains recognizes that the distinctions between the two “can often be a rather blurry line in actuality” (85). Attempting to clarify their distinctions Skains states practice-led research

focuses on the nature of creative practice, *leading* to new knowledge of operational significance for that practice, in order to advance knowledge about or within practice.

The results of practice-led research may be communicated in a critical exegesis without inclusion of the creative artefact. (85-86)

In contrast, in practice-based research “the creative artefact is the basis of the contribution to knowledge” (86) and “the creative act is an experiment...designed to answer a directed research question about art and the practice of art, which could not be explored by other methods” (86).

According to Skains, what “emerges, then, from this methodology, is the *exegesis* that accompanies the creative work: that knowledge that has remained implicitly within the artist, made explicit and seated within the context of the scholarly field” (87).

Despite Skains's clarification of the distinctions between practice-led and practice-based research, I still regard BETWEEN SPECIES: CHOREOGRAPHING HUMAN AND ANIMAL BODIES as sitting on the border, or occupying a space, between these two methodologies. However, I can state that it did emerge, as Skains asserts, from speculation about a particular question, and a rather odd one at that. That question is: *what would a zoo look like as choreography?*

## INTRODUCTION

*We believe that much of the cultural interest in zoos has been overlooked because man is treated as a spectator rather than a part of nature. In reality, man's welfare and future are bound up with the natural world in ways that are almost beyond belief. But cultures have their own momentum and are not easily turned aside. They change when people begin to look at themselves and their surroundings in new ways. Herein lies the opportunity and mission of the progressive zoo as a channel of information and understanding. If one is concerned about mass appeal, the manner of presentation is as important as the content; but in the context of life and landscape, relevant, engaging, and provocative subject matter should be in plentiful supply. For culture is merely life, its circumstances and purposes, organized with insight and vision perhaps, but essentially drawn from human experience. It may reveal mysteries, but it should not set out to be mysterious. It would have its surprises, its humour, its pitfalls for the unwary, and challenges to smugness. It would not invite a snobbish following; it requires that one only be interested in life.*

Raymond Moriyama, *Metropolitan Toronto Zoological Park Glen Rouge: Feasibility Study and Master Development Plan* (1968)

## ANIMAL BODIES

On the inside of my left forearm, nestled between my wrist and the crease of my elbow, there is a tattoo of a sea otter. It lies content, floating on its back holding a bright green apple as if it were a sea urchin en route to its permanently grinning mammalian mouth. My sister Heather drew the image that would eventually become the tattoo. She drew it because, when we were young, we would pretend to be sea otters when we swam together. She recalled that during the same time period I was fastidiously eating tart green apples. I remember swimming with Heather—floating, diving, and chasing one other; submerging ourselves under fresh, salt, and chlorinated water; re-imagining ourselves momentarily as otters—and as seals, sea lions, dolphins, porpoises, sea turtles, penguins, squid, octopi, barracudas, manatees, sharks, manta rays, walruses, and whales—creatures we had seen in television documentaries, aquaria, and zoos. Temporarily borrowing perceived aspects of their movement, adorning ourselves

momentarily with fleeting flickers of their different dexterous affinities for a submerged world, which our bodies could only partially inhabit, we both became excellent swimmers.

I have a photograph pinned to the bulletin board that hangs on my bedroom wall. It is a portrait of me at age three, sitting cross-legged, hands in my lap, shoulders slightly raised and smiling coyly. Although faded from age, I can still make out the hue of my dark green t-shirt and shorts, green socks, and blue and white shoes. Along my arms run numerous small temporary animal tattoos, which spiral around down to my forearms. My more mature body is now (much to my mother's dismay) literally covered in permanent tattoos, the majority of which are images of animals (including lions, panthers, a small bird, and an armadillo), and consequently, this photograph could be interpreted as an eerie premonition. But, because "destiny" seems the fare of lunatics, and because I prefer to dissuade my mother from wondering if the moment captured within this photographic image is in some way responsible for the images now permanently etched into my skin, I think of it as a sign; a through-line in a life otherwise marked by many willing and unwilling detours, accidents, changes of direction and shifts in orientation; the inscription of an enduring fascination with being a body connected to other bodies; a body adorned, influenced, and affected by animals.

I have seen animals at zoos, safari parks, circuses, animal shelters, pet stores, city parks, aquariums, oceans, lakes, forests, natural history museums, provincial parks, theme parks, rural flea markets, malls, farms, fairs, schools, nature reserves, pastures, cottages, and homes. I have watched animals navigate these "real" places, as well as their environments within nature documentaries, films, television shows, video games, and animated cartoons. I have read about animals, both actual and imaginary, in books, magazines, newspapers, graphic novels, and comics. I have drawn, painted, collaged, etched, photographed, and sculpted animals in art



classes and written about animals in academic work for archaeological, anthropological, scientific, and literary courses. I have dissected animals in high school and university labs, studied their bodies in classrooms, and their behaviours in “the field.” I have also been fortunate to engage physically with real animals—riding horses when I was young, visiting livestock at friends’ farms, and caring (both successfully and unsuccessfully) for an assortment of animals including dogs, cats, rats, guinea pigs, mice, fish, rabbits, gerbils, hamsters, and a chinchilla. I have also watched them die—by my hand when I dropped a brick on a bird that had been hit by a car—and by the hands of others when my cousin skipped tadpoles across the lake; when my step-grandfather snapped a garter snake like a whip and broke its spinal cord; when my neighbour took an axe to the snapping turtle that lived under the veranda that fringed our house; and, when my biological father inadvertently ran over a kitten and forced its internal organs out of its stomach while it screamed on the asphalt. Their real and virtual bodies, remote and distant, intimate and close, have intermingled with my senses, feelings, and identity. Consequently, these images or memories have imbued my experience, perception, and creativity with affective tones emanating from beyond my body and beyond my species.

It was not until not until I encountered an essay by Alphonso Lingis called “Animal Body Inhuman Face” (1997) that I synthesized the disposition of my many bodily, creative, and intellectual entanglements with animals with nuance or clarity. Divided formally into two parts that address, respectively, the constitution and differences between a mobile “animal body” and a static “inhuman face,” “Animal Body Inhuman Face” is an insightful, poetic, and creative semi-speculative exploration of past, present, virtual, and real human-animal relations. It is written with explicit and implicit reference to a bestiary of diverse animal bodies, a menagerie of intellectual and creative thought, and a swarm of anthropological and historical cultural

references<sup>1</sup>. A philosopher of phenomenology and transgression, Lingis's attraction to the sensations of hybrid bodies and their unorthodox but generative couplings is evident in the first lines of the essay, through his depiction of sea anemones.

Described as “animate chrysanthemums made of tentacles...with but one skin that serves as mouth, anus, and vagina” (113), Lingis outlines the anemone's relationship with specialized algae that live inside it. Operating in tandem, the anemone extracts food from the ocean and then brings this food *inside* its body while the algae extracts energy from this food and thus facilitates energy being absorbed by the sea anemone's body. Both creatures are distinct, but they depend on one another for nourishment, and consequently, for existence. This brilliant example of interspecies cooperation and mutuality is followed by Lingis's elucidation of a more complex and multi-staged relationship of embodied intimacy between Brazil nut trees, bees, orchids, and rodents:

The flowers of Brazil nut trees can be pollinated by only one species of bee. This bee also requires, for its larvae, the pollen of one species of orchid, an orchid that does not grow on Brazil nut trees. When did Brazil nut flowers come to shape themselves so as to admit only that one species of bee? What we know as Brazil nuts are kernels which, on the tree, are enclosed in a very large wooden husk containing hundreds of them. The Brazil nut tree is hardwood, and the husk about its seeds is of wood hard as iron. There is only one beast in Amazonia that has the teeth, and the will, to bore into that husk. It is a medium-sized rodent, and when it bores through the husk, it only eats some of the seeds. The remaining seeds are able to get moisture, and push their roots into the ground. Without that rodent, the nuts would be permanently entombed, and Brazil nut trees would have died out long ago. (113)

Overtly stating that there is “perhaps no species of life that does not live in symbiosis with another species” (113), Lingis provides evidence for this observation through reference to the work of Dr. Lynn Margulis who examines the evolutionary migration of chloroplast and mitochondrial bodies into the cells of plants and animals (Margulis 2002). Through Lingis’s descriptions, hints of a pervasive choreographic world of symbiosis operating at both macro and micro levels is given rhetorical force by his enumeration of the multitude of intimate and vital processes, which couple human bodies and bacterial bodies together. By extending the domain of “Nature” into the domain of “human nature,” Lingis maneuvers his observations into conjunction with an almost literal interpretation of the concept of “becoming animal” (Deleuze and Guattari 2011 [1987]) through positioning microorganisms as biological micro-agents of human “individuation as organisms” (113). Lingis then telescopes out of the human body’s inner-space and into its outer-space—its exterior relations with the world—noting practical and macro human agricultural relations with “rice, wheat, and corn” and by extension their associated “nitrogen-fixing bacteria” (114).

Having established symbiosis as a pervasive interactive, interpenetrating force, Lingis pushes further, into the domain of lived intersubjective experience, observing that “we also move and feel” with other beings (114): “A pack of wolves, a cacophonous assemblage of starlings in a maple tree when evening falls, a whole marsh throbbing with frogs, a whole night scintillating with fireflies” (114). When Lingis evokes those starlings, those frogs, and those fireflies, he also evokes their relation to their surroundings—an entire maple tree, a whole marsh, a whole night, and by extension, a whole shared world full of nonhuman subjectivity. Lingis positions the human body as an interface, continually immersed in relations of interiority and exteriority with

otherness, and as a subject performing affective ties with the myriad of nonhuman life perpetually shimmering and shifting around it.

Having lived in rural Illinois—in a similar geographical region of the United States as that evoked by Lingis—I can recognize many of the animate assemblages he animates in his writing. I remember the lightning bugs flashing in the thick humid Illinois night and dancing around my sister and I, and the dying trees so thick with starlings that they looked full of leaves. I can also identify other nonhuman multiplicities swarming in distinct memories of my youth: the throngs of grasshoppers jumping through the thick patches of brown-eyed susans and daisies that I waded through while visiting my grandmother’s cottage in Quebec; the deafening chorus of cicadas whose sounds permeated the dense summer air enveloping me on my walk to the local pool; the herd of inquisitive and unflappable fallow deer who feigned timidity while persistently stalking my grandmother and I during visits to Marineland; flocks of Canada Geese navigating the pale grey sky above me as I walked to catch the school bus in Ottawa during the autumn; the troop of stark black-and-white Colobus monkeys agilely clamouring over the twisting ropes and simulated cliffs of the Monkey house at the St. Louis Zoo; the flood-like descent of blue-grey wildebeest bodies streaming down a cliff face and into a river thick with hungry crocodiles on *Mutual of Omaha’s Wild Kingdom*; the schools of fish, glimpsed through cheap swimming goggles delicately swirling around my mother’s legs in the waters off Pensacola, Florida; a family of loons gliding on the surface of Lake Louisa in the Laurentians whose smooth, collective trajectory was punctuated by intermittent, sharp vertical dives deep beneath the dark water; the moonlit forms of a slender fox and her kits shifting into the moist darkness that engulfed the land flanking an Ontario rural road at night as their sinewy bodies melted into the shadows and the long grass cultivated by the summer’s pervasive heat; powdery yellow moths

touching down momentarily in my mother's lush garden only to flicker upwards seconds later and then waft away on the warm breeze; and throngs of lascivious horseshoe crabs massing together on the briny Cape Cod shore to form the orgiastic phalanx of armoured invertebrates inadvertently assaulting an already dissolving sand castle that my mother and I had made.

According to Lingis, nonhuman movements and their experiential choreographies speak to the multiplicities in us:

the human form and the non-human, vertebrate and invertebrate, animal and vegetable, conscious and unconscious movements and intensities in us that are not yoked to some conscious goal or purpose that is or can be, justified in some capitalist programme for economic growth or some transcendental or theological fantasy of object-constitution or creativity seated in us. (114)

For Lingis, movement can be separated into two different orders—goal-oriented and affective. Goal oriented is ascribed to a distinct human social world structured by imperatives, which direct experience, while affective encompasses a complex spectrum of affinities and exchanges, which constitute lived experience and sensorial congress with the world. The former is a prescription that orders life and living; the latter an invitation to participate in life and living. Lingis mentions the prescriptions of the first briefly in order to delineate its providence, domain, and limits:

We assign special importance, in everyday life, to purposive or goal oriented movement. Certain movements of our bodies are isolated, and the circuitry set by conditioning for certain operations in conjunction with the movements and velocities of household utensils, tools, and machines. Of themselves, these movements are not initiatives by which an agent posits and extends its identity. They are nowise the movements by which

a conscious mind seeks to maintain and consolidate and stabilize itself; even less integrate itself. (114-115)

In contrast to these movements of prescriptive purpose and flowing against a tide of cultural “wisdom” derived from a generation of neo-Darwinian thinkers who imagine the animal body as a living machine directed by “selfish genes” engaged in the pursuit of a univocal notion of fitness (Dawkins 1989 [1976]), Lingis questions the determinative nature of nature. Lingis observes: “How little of the movements of the bodies of octopi frolicking over the reef, of guppies fluttering in the slow currents of the Amazon, of black cockatoos fluttering their acrobatics in the vines of the rain forest [...] are teleological!” (115). I felt the profound gulf between Lingis’s two modes of living probably most distinctly when I was an undergraduate biology student at university. In high school, I had attended an intensive arts program in Ottawa where I had made animals the focus of almost every project. I created drawings and paintings of hybridized human animal portraits, shaped zoomorphic pottery inspired by Mesoamerican artifacts and captured photographic images of the beautiful cattle that lived at the Canadian government’s experimental farm. My goal at that time was to become a marine biologist and work with pinnipeds (seals and sea lions). In pursuit of this goal, this virtual teleology, I went to the University of British Columbia to embark on a study of living creatures.

When I arrived in Vancouver I was astounded at the lushness of an intersectional world where city, sky, mountain, ocean, and rainforest intermingled vividly. During my first year I explored the verdant campus located on a peninsula that seemed to blend into the contours of the epic landscape. I was also explored by this landscape. At night, gangs of huge raccoons would gather around the dormitory where I lived. By day, oceanic seabirds—gargantuan creatures that dwarfed their distant relations flying over the garbage dumps in Ottawa—would descend from

the sky and settle around the student union building. Pheasants could be glimpsed darting through foliage around the campus and huge-footed coots delicately navigated the large lily pads in ornamental pools and shallow ponds. In the dark water off Wreck Beach slate grey seals surveyed the shore periodically while frolicking in the rocky surf and, near Kitsilano Beach, warrens of formerly domesticated rabbits grazed, abandoned by their human owners, but thriving, nevertheless. These environments visibly and invisibly flowed into one another.

Ironically, the vitality of this fluid new world ended at the geometric doors of higher learning. In the university classrooms, all these creatures were interpreted as parts, as components of lesson plans, and as living machines composed of extractable skeletal, digestive, muscular and nervous systems. Forces that coursed across diverse linked communities and between unique living bodies became generalizable lines of textbook pages to be memorized. These two worlds and their inhabitants existed in distinct opposition: one was still, static, impenetrable, and rigidly ordered, while the other was stirring, animate, interpenetrating, and mercurial.

I remember walking into a vertebrate biology lab after spending a day in the rainforest that engulfs the peninsula where the campus is situated. I looked down at the long, stretched out, and flattened body of the dead wet cat, which I was tasked with dissecting. Laying inert in its metal tray, its form was rigid. Its large green eyes were still and dull. Its thick wet black fur was saturated with wreaking chemicals. It was like no cat I had ever known, and when I sliced its stomach open, it offered no resistance, reaction, or response. Although I became well-acquainted with its insides, it was an empty shell, a husk full of soft, but nevertheless mechanical parts. This learning exercise was likely imagined as bringing me closer to understanding what a cat was— how it was organized and how it was similar to other things— but it also pushed me away from

contemplating and considering what a cat potentially could be, how it organized itself, and how it related to its world. I wondered about the other animals I had dismembered earlier in the term—the bivalve, the locust, the sea star, the sea urchin, the sea cucumber, the perch, the frog, the quail, the dogfish, and the rat, and I wondered what I had actually learned about them that was of value to me, or to them. Did I understand any of them better, or were they just a means to perceiving them as objects? Was not I just an object and collection of systems? How did I organize myself? How did I relate to other things? How could I relate to things?

I attempted to have a conversation about these questions with the lab's professor. She was alarmed and genuinely confused by my train of thought. I was pragmatically notified however, that if, as I professed, I wanted to study real living "things" I likely wouldn't get the opportunity until graduate school. After a youth spent dreaming of my studies, I was momentarily upset, but, after another year of "progress," her prognosis was confirmed. Looking back, I am ultimately grateful for this moment of honesty from this professor. It is a resource, which seems in short supply in the world, especially in universities, where more often than not, "plans within plans within plans" (Herbert 1975 16) seem to supplant any discussion about very real potentials or new possibilities. For me, at that time, it all just didn't seem worth the wait, as right outside the rectangular classroom's rectangular doors there were animate worlds full of movement. I decided to leave the sciences altogether to wander and wonder.

One of the places that I roamed to besides the tidal pools, shorelines, estuaries, and forests, which encased Vancouver, was the city itself—specifically the downtown core. At that time, it was an uneasy and unruly meeting place between Asian and Anglo, white-collar and blue-collar, settler and indigenous, hiker and logger, urban and rural, gay and straight, liberal and conservative, eco-capitalist and eco-hippie, and its contradictions were perhaps best represented



by the bleeding and semi-conscious junkies who lay prostrate, adorning the steps of the Vancouver central police station at Main and Hastings. It was a city decidedly fractured by the different predilections of its diurnal and nocturnal residents and their incommensurable affinities with the world around them. By day, the city was awash with bright, yet homogenous Gore-Tex jacket and hiking boot clad people and the plain dark suits of industrious businessmen and women. At night, a darker, yet more brilliant ecosystem was revealed: clubs run out of basements with dripping pipes “supervised” by the Hell’s Angels; newly released convicts with concealed weapons searching for lone strangers to mug before they were ceremoniously returned back behind bars; strip-clubs featuring “exotic” dancers covered in track marks despondently hanging off metal poles and barely cognisant of the loud music blaring around them; gay bars decimated by, or, operating gleefully in spite of the dark legacy of AIDS and beckoning to prospective patrons with beguiling flashing neon lights that pierced through clouds of smoke; dripping shadows cast by homeless bodies perpetually moist from the relentless precipitation; and a burgeoning youth-directed nightlife, which amalgamated gay, straight, and decidedly undecided patrons through their shared affinities for illicit substances and the haptic opportunities provided by electronic music. I explored this urban ecosystem and interacted with its various communities. Like the animal packs I glimpsed around Vancouver, these animate multiplicities also embodied the possibility of generating new associations and connections.

In Vancouver I continued to extend my perceptual world, or as Jakob von Uexküll might have called it, my “*umwelt*” (2010 [1934]), through boldly entering new territories, developing new habits, and interacting within diverse subjects also living in their own perceptual worlds. There were many new “becomings,” and I suppose that, in some ways, I was “becoming animal” (Deleuze and Guattari 2011 [1987]) through my furtive exploration of these light and dark

creaturely naturecultures (Fuentes 2010; Haraway 2003). My hair colour changed, my clothing changed, and my behaviour changed, articulating and rearticulating in the eerie mimetic space between display and camouflage, representation and assimilation, as I grafted myself onto “the erotic splendors of other animals” (Lingis 119). Steadily drifting further and further off course from the trajectory of a virtual teleology inherited from the imperatives of my military upbringing, I found myself outside of myself, but somehow more inside myself than before. I began to move and love unpredictably. I was propelled by an awakened affinity towards motion and the exploration of my own subjectivity through movement and was set on a haphazard course. I began experiencing myself as a body organized in relation to other bodies open to new sensual couplings, both rhythmically, and otherwise.

During this period of my life I was learning in a way I had never recognized while in school. I was not memorizing static figures but becoming a protean figure. The “facts” of my understanding were not demonstrated by a score on a test or a paper received two weeks after it was submitted, but immediately, through my ability to create correspondences or my failure to create correspondences within environments filled with other beings. My movements became a space of dialogic attunement, communication, interpretation, exchange, and creativity as bodies came into relation with themselves, with each other, with sounds and rhythm, with memories, and with the shifting contours of the places they inhabited. Consciously extending “neither toward a result nor a development” (116) and with the “utterly noncumulative recurrence of orgasm” (116), my perception of myself shifted. Although I managed to complete school with a degree in English Literature, I was beset with the urge to explore embodiment—movement “without theme, climax, or denouement” (115) and the “spreadings of duration” (115). This urge eventually led me to the School of Toronto Dance Theatre where I participated in a three-year

professional contemporary dance training program. In retrospect, it's ironic that the stillness of a dead cat was one of the forces that propelled this line of flight.

In the latter part of "Animal Body Inhuman Face," Lingis speculatively describes the "evolution" of human experience—the dramatic shift from affectively organized multi-species assemblages of animal bodies to an ordered social life directed by univocal (in)human faces. Lingis conjures up a mythic prehistory where a vividly embodied fictional ancestor is in congress with a porous world that is receptive to divergent impulses, rhythms, and sensations.

Primates in the savannah, chimpanzees, gorillas, Neanderthals, Cro-Magnons, in packs. Moving with the sun rising on the horizon, with the wind rustling the staves of elephant grass, the movements of their legs and hands composing with the elastic bend and spring of the staves of grass. A flight of a crane draws their heads upward, a rush of wildebeests excites the velocities emanating from them, they dance a punk slamdance with the scavenger hyenas. Hands extended upon the arms, backs, legs, heads of one another, the tensions and flexions of their torsos composing with the tensions and flexions of those arms, backs, legs, heads. They lie on the ground, shifting under the spring of the grass and the stirring of small insects, overhead the branches laden with leaves and berries sway with the gusts of wind. Their fingers clasping the fingers of those leafy branches, berries shifting, holding, falling into their fingers. Their fingers composing with the movements of their lips, their tongues, bringing berries also to the lips and tongues of one another, taking berries from the fingers and lips of one another. Inside their mouths marshes of bacteria, six hundred species shifting in the foaming saliva, pulsate, neutralizing the toxins in those berries. They murmur with the rustling

leaves, answer the chatter of monkeys and lemurs and the bellowing of elephants and the cries of parrots and eagles. (120)

Lingis evokes these bodies at length in order to contrast them with their antithesis—a society structured by the whims of “the despot” who no longer “exposes his moves to the composition of adversary moves and velocities” and who “covered the head of his body with a surface, a blank wall, his face” (121). According to Lingis, the “movements and velocities of the pack ran up against this blank wall” and when they did “they were sent off, recoded” because the despot’s “signs, his words are directives, imperatives. Action, movements must take their origin in his words” (121). The despot organized his subjects, structuring their bodies and movements:

The lines of movement, of composition with other movements, with which they live and act, they are to line up; the present movement they are to make the consequence of the past movement, coherent with it, the present movement they are to make a pledge for the movement to come. They are to exercise surveillance upon their own movement in his place, subject each movement to judgement, absorb the line extending outward in the black hole of their own look, where it turns in spirals of subjectivity, subjected to judgement, to yes and no. (121)

Lingis’s description of the figure of the despot resonates deeply with aspects of the disciplinary reality of my dance training, a reality where I transformed into, in many respects, not an animated and affective subject, but a mobile object subjected to various movement systems, each one itself a product of a specific teleology. Although dance was evoked with reference to nebulous terms like freedom, agency, and the organic, the reality was that movement was being ordered according to codified lineages of human aesthetics. This ordering, which undoubtedly extended certain abilities while inarguably diminishing others as bodily relations, became

stabilized, fixed, and subjected to various aesthetic frames, social hierarchies, and diagrammatic conceptions of the body.

As a rigorous external surveillance by educators at the School of Toronto Dance Theatre was gradually replaced by an even more rigorous internal “choreopolicing” (Lepecki 2013) perpetually demanding that my life be sublimated to “art” so that “life” could be represented through art, I slowly became as rigid as that dead cat. My motion was now subject to imperatives, which if met, might permit a career in dance. My body was no longer a space of wonder, but a site of regulation and source of frustration. Its imperfections, inconsistencies, irregularities, ignorances, and injuries became more vividly pronounced. The sense of creaturely exploration that had previously emerged in relation to diverse moving human and nonhuman worlds was replaced by an adherence to professional values and standards. The living, lively, heterogeneous space of the world had been replaced by the homogeneous and blank space of the dance studio. Increasingly I found myself, not in dialogue with the life that surrounded me, but pantomiming anesthetized abstractions of life summoned from other people’s experiences within the frame of a mirror. No longer captivated by dance, I found myself its captive.

My wholehearted commitment to the study of movement had effectively tamed a blissful repetitive compulsion and domesticated the deliciously not productive into the blandly productive (Lingis). I had not escaped any teleology, I had merely substituted one for another. After a particularly bad string of injuries that irrevocably altered my stability, in multiple senses of the word, I found myself utterly lost and adrift with neither compass nor map. I went out dancing at parties and nightclubs, hoping to be inspired, like I had been so many years previously. However, I only found disappointment, as I seemed to have developed aesthetic cataracts. Rather than finding any extended appreciation or particular delight in the abundant

difference perpetually shimmering within a multicultural nexus like Toronto, I now judged other bodies, as well as my own, according to a constellation of dance imperatives that insisted on particular qualities, rhythms, executions, coordinations, and somatic perceptions. Although without a kingdom of any magnitude to speak of, I had become a despot within my own subjective experience of the world. Although no longer dancing professionally, the profession of dancing clung to me like a second skin, inhibiting connection, blocking empathy, and ultimately stifling any creative entanglements.

Somehow, in the midst of all this, animals found me again. They had been there all along of course, but I had rarely glimpsed them as my attention was directed towards the mirage of a destination. Raccoons in attics, pigeons on ledges, sparrows in subway buildings and malls, squirrels on telephone wires, opossums and skunks under verandas, Canada Geese on the university campus, all quietly transforming an urban world of human imperatives in the form of anthropomorphic architecture and design into nonhuman spaces of creaturely affect. Their bodies indicated a way to move and live alongside, yet in defiance, of human prescriptions. I saw new choreographies; indeed, I was surrounded by them, as attics became nests, ledges became perches, telephone wires became trackways, verandas became hiding spots, and the green lawns of university campuses became nesting sites and sources of energy for migrating bodies. I went back to the zoo and found it to be a space overflowing with animal bodies transformed by captivity yet still able to transform me.

These quotidian animal performances were in fact provocations to think otherwise about myself and the environments around me. Due to our obvious bodily differences it was impossible to “judge” their movements by human standards. Their nonhuman choreographies relentlessly pierced through my aesthetic cataracts as I walked along the street, waited for buses, sat on my

patio, gazed out my window, walked to classes, or walked around the zoo. I could witness other bodies again. In thrall to this epiphany, I began to consciously examine these avatars of difference, not to control or predict them, but to be affected by them in order to generate embodied impressions of how animal bodies, animal spaces, and animal movements were differentiated along implicitly differentiated coordinates, dimensions, and scales. I felt new rhythms, new velocities, new vectors, and new forms fill my body—all of which spoke to a reality of gestural, spatial, rhythmic, temporal and ultimately perceptual diversity. I remembered swimming with my sister and our imaginative aquatic borrowing of animal affinities. I realized I could still perform this wondrous act of embodied correspondence and differentiation.

When I began my doctoral degree in Dance Studies I was interested in exploring nonhuman choreographies and their effects on human bodies. However, I wasn't sure how exactly to do this. Although animals were abundant in historical dance literature and often positioned as beings able to dance and/or generative figures that humans imitated, within contemporary dance studies animals and humans existed in separate worlds. Humans danced, and animals did not. Humans had choreographies, but animals did not. Humans could use animal representations within their choreography, but animals themselves did not affect these choreographies, or induce the representations within them. Animals could be subjected to human choreographies, but humans were not subjected to animal choreographies. I imagined that inserting my research within the disciplinary framework of dance studies would be difficult, if not impossible.

I eventually realized that one possible entry point for my exploration of animal choreographies was the zoological work of dance and cultural studies scholar Jane C. Desmond. In *Staging Tourism: Bodies on Display from Waikiki to Sea World* (1999)

Desmond deliberately focuses on the different ways that different animal bodies are staged within zoological gardens and trained to perform in choreographic spectacles for animal attractions. Although her work situates animals as primarily passive figures that are inserted into human ideological constructions, her sharp focus on the bodies of animals appears to open the door to tentatively speaking more deliberately about these stagings of animals as choreographic in nature. I reflected on my recent trip to the zoo and thought about the ways that the animals there were contained and directed by human designs, but also how they were resistant to these designs as their very forms and actions spoke to different worlds outside of the zoo's frames. I remembered the ways animals there had affected me and my ideas about movement. I decided that Jane Desmond's work would be good place from which to begin my research on animal choreography and that the Toronto Zoo was a place that could serve as a site for these explorations. Using Desmond's experiential and ethnographically informed study as a model, I began going to the Toronto Zoo regularly. Every week I paced within its human-animal landscape while quietly envisioning a way of to step outside of dance studies' human territory and explore, in a less anthropocentric fashion, the idea that "dance at any given time, place, and context is what those who mobilize the term in discourse mean by that referent"

(Desmond 2017 [2016] 00:28:45- 00:28:51).

## **ANIMAL CONTRIBUTIONS**

During my research period at the Toronto Zoo I also immersed myself in academic literature about zoos in order to familiarize myself with the field and to identify potential opportunities where I could make a contribution to that field that would be either unique or significant. My original plan for my dissertation was ridiculously ambitious: I wanted to create



an interdisciplinary project emerging from a primarily ethnographic means of engagement that was informed by historical information and theoretical ideas that contextualized the Toronto Zoo as a Canadian zoological institution in relation to other international zoological institutions and situated the zoo as a contemporary choreographic interface for the bodies of humans and nonhumans. At the insistence of my committee, my study was also to be complemented by a choreography, or research-creation, which integrated aspects of my academic work. I was initially apprehensive about this addition and so I examined several scholar's textual explanations of research-as-creation and research-as-practice. I was interested, yet unconvinced, and perhaps even confused. Looking at actual examples of research-as-creation projects, I became perplexed, as many of the examples seemed neither "research" nor "creation" unless the word "failure" could be applied to them in a positive sense (Halberstam 2011). Nevertheless, I continued to work on my academic research about choreography at the zoo while working on a choreography about the zoo. I imagined both endeavours as sealed off from one another, separate, and distinct.

After gradually digesting the zoo studies literature and ruminating on it during my visits to the Toronto Zoo and trips to other zoological institutions, I became conscious of the continual repetition of a theme that I found both intellectually myopic and emotionally disquieting: the foregrounding of the zoo as an unreal space of domination produced by colonialism, nationalism, racism, and speciesism. This perspective, while unarguably conditionally "true," was also very obvious and produced at the expense of engaging with other aspects of the zoological environment. Thus, while astute in some respects, the broader implications of these critical findings often erased the significant differences that existed between distinct institutions, often denigrated the existence of the real nonhuman animals who lived in real spaces in co-ordination

with real human animals, and often reified a particular orientation that implicitly tainted the opportunity for a zoo to be either perceived by others as anything other than an illusory space or engaged with meaningfully.

My research at this time, due to some institutional issues—at both the university and the zoo—consisted primarily of walking at the Toronto Zoo along the same route at different times during different seasons and noticing my body’s changing relationship to the space and to the animal bodies in that space.<sup>2</sup> Consequently, I became both more familiar with the zoo’s environment and more aware of subtle changes occurring within it. It was a quite simple maneuver to overlay the space with many of the opinions and ideologically-driven ideas that other scholars had produced about zoos. However, in as much as these ideas informed my vision, they also thwarted it by prevented me from engaging with what was unfolding in front of me - from being in-formed by my own experience. I was continually perplexed as to why the key meanings that scholars drew from their zoological “immersion,”<sup>3</sup> and then staged for an audience in textual form, were so devoid of wonder for this shifting space, which housed ontological diversity. I also wondered (perhaps naively), why, if the zoo was a product of a culture of domination founded on colonialism, nationalism, racism, and speciesism, that the discovery of these themes within its confines was significant? I also wondered, if this was the case, if it could ever be otherwise?

When questioned or interrogated about my research by academics, I am often asked if I have read John Berger’s “Why Look at Animals?” (1980). This question, although sometimes an innocent way of starting a conversation, often implies the belief that “John Berger had said it best” and, the related question “Why bother to look at the zoo?” It often seems as if one man’s research has somehow both begun and ended intelligent discussion of the zoo, and that because

of this, any research of the site not invested in confirmation or elaboration of his vision indicates complicity with the zoo's imperialist and dominionistic agenda. When in these circumstances I usually try to reply politely, yet firmly, and explain that "Yes, I have indeed read 'Why Look at Animals?' many times, and think it is certainly insightful. However, the real insight in it stems from its clear articulation of a particular hegemonic academic 'way of seeing.'" To me, its vision seems monolithic, reductive, elitist, and perhaps even paternalistic.

Because of my regular roaming at the zoo, my roaming outside of the zoo was likewise inflected by my experience of watching people and animals there and tacitly sensing its different architectural, curatorial, classificatory, and staging strategies. I recognized many aspects of the zoo that were identified by different authors as distinctively pernicious present in many other environments. I found it odd that the zoo was identified by so many people who participated in cultural industries that conserve, classify, stage, animate, and re-animate real bodies and bodies of knowledge as an embodiment of inhumanity while their own particular environments were conveniently spared from this judgement— often even uncritically envisioning them as places that freed ideas, knowledge, and human subjects. As a participant in both artistic and academic worlds, I felt this was clearly not the case, as I had been, at various times, both victim and witness to, and perpetrator of domination in these contexts. Perhaps it is far easier to perceive a place or a situation as "messy" when you're in a space you don't visit regularly. Perhaps the same goes for conscientiously suggesting useful ways to "clean it up."

Concurrent with my roaming ethnographic research at the zoo was my creative engagement with the space undertaken in partnership with a long-time dance colleague of mine named Danielle Baskerville. For this endeavour, Danielle would join me at the zoo and we perform research for our dance work by walking around together, discussing ideas we had read

or thought about, and, spending time in concentrated contemplation of each species of nonhuman living there. Our initial intention was to elicit kinaesthetic responses in ourselves and leverage our own abilities of watching and empathizing with human bodies—abilities honed through our extended practice of dance. We hoped we could transfer these skills of attunement towards the affects that specific animal bodies could elicit. During this process of concentrated attention our bodies became momentarily unrecognizable again and again in response to the biological and even subjective diversity, which surrounded us as the zoo's staging of life (Desmond 1999) momentarily receded. It was during these brief eternities that the zoo became a place for us to not just create a dance, but to make and unmake ourselves, and shift our experience and understanding of movement through choreographic dialogues with nonhuman life. Slowly, through our discussions and embodied reflections, a methodology for creating a dance work took shape. Its focus was not only about the zoo's treatment of animals, but also the zoo's treatment of us.

In August of 2016, in the middle of my research, during a period where I was again plagued by a number of institutional setbacks, which disturbed my schedule of virtual research plans, I was invited to a workshop being held in Hamilton, Ontario at the beginning of December. The event was an incubator for an interdisciplinary collection of critical scholarly writings about zoos. I was both flattered and nervous but eagerly accepted the invitation to participate, thinking it could only encourage me to decide on a clear trajectory for my research. In preparation for this opportunity I wrote a paper about the staging of national identity at the Toronto Zoo that attempted to merge an experiential account of my zoological roaming with some ideas from existing academic research about zoos and wilderness. The paper described and contrasted two different exhibitionary areas at the Toronto Zoo that staged Canadian wildlife and

integrated scholarship about Canadian wilderness and zoological gardens. At the time of its completion, I imagined the essay to be a clear model for my future treatment of the entire zoo, and, due to the relative scarcity of writings about Canadian zoological institutions, a unique and significant contribution to the collection.

At the workshop, there were about fifteen scholars assembled from across North America, Europe, and Asia, the work of many of whom I had read. A number of the American scholars were still visibly in shock from the “surprise” election of Donald Trump earlier in November. During the introductory dinner, some of them were collaboratively speculating about the meaning of the election and the future of America. Over the course of a dinner of vegan Indian food I was asked about my opinions on the American election. After a bit of deliberation, I answered that, after living in rural Illinois, suburban Alabama, and New York City, and also recently visiting California for a conference, I was only surprised about their surprise. Visibly aghast, they asked me to explain. I told them that since Toronto had only recently been relieved of its conservative crack-head mayor, I was not really in any position to judge their political situation, nevertheless, it was my understanding, that America was a place particularly divided along gendered, racial, economic, and ideological lines, and that the election, although unfortunate for many different reasons, was a sign that this unrest is entirely unresolved. In response, one of the academics told me I was mistaken, that “America” wasn’t actually like that. In that moment, an image of my dissertation committee appeared to me, and in order to spare myself from any undue professional setbacks that might result from continuing this conversation, I acquiesced. I said that I was obviously mistaken. I explained that since I hadn’t been to the United States for any extended period lately that they, in all likelihood, knew the situation better.

The next morning the workshop began. It was organized according to a strict schedule and each day a portion of the scholars would present their work and afterwards this research would become the basis for a group discussion. My own work was scheduled to be discussed in the afternoon on the second day, so I relaxed and focused on listening. I learned a bit about zoos, a lot about key issues, which informed and consumed other disciplines, and even more about the social composition of the humanities scholars that wrote about zoos. I became particularly fixated on similarities between the previous night's conversation about American politics and particular ways that some scholars were thinking about nature. In both cases, an imaginary idea of a generalized and idealised "freedom" held dominion over a specific, complex, and contradictory lived reality. Just as they couldn't fathom that Donald Trump was going to be president, despite the fact he was indeed definitely going to be president, they also couldn't fathom a world that was congruous with zoos, despite the fact that we had all gathered here to discuss them. This strange disconnect between the ideal and the real was evident in varying degrees in every discussion that day but was particularly pronounced in the views of one scholar who, invested in a zoo abolitionist agenda, divulged that he never had been to a zoo, and never needed to go. Obviously, the view from the ivory tower's disciplinary windows offered a privileged vantage point from which to not engage. I was frustrated with this perspective. I had been to the Toronto Zoo over 40 times and I was still learning new things—about the space, about the animals, about movement, and about myself—every time I visited.

In response to my frustration with this situation, I decided to not share my essay about national identity and instead chose to show a video of the dance work Danielle and I had begun working on at the Toronto Zoo (see Appendix A). I had heard so much about the zoo being an unreal space of illusion and domination—a perspective scholars often wrought by grafting

together information from historical documents, philosophical theories, and ethical opinions—that I thought it was appropriate, and necessary, to present work that gestured in another direction. I explained that the work’s methodology was creatively predicated on concepts of metakinesis (Martin 1965 [1933]) and kinesthetic empathy (Sklar 1994) theorized by dance scholars in conversation with movement practices and the work of neurobiological researchers and informed by *their* academic research about zoo culture. The dance piece attempted to synthesize the institutional structure of the zoo with bodily reflections of animals at the zoo, which emerged from our experiential immersion in the space. Predictably, after the video showing, I was asked why I had chosen to overlook the domination at the zoo? I replied that I hadn’t and that the structure of the piece was based on the structure of the zoo, and that both the order of the movement sequences and divisions between the movement sequences were determined by the zoo’s ordering of bodies. I was asked why the movement was beautiful and I replied that whether or not it was beautiful was a matter of debate and that opinion was certainly not true from the perspective of particular dance discourses, but, if it was beautiful to a viewer, it was because that was how they perceived it. I explained that the work was not meant to validate or invalidate the zoo—or validate or invalidate other research perspectives—but to integrate aspects of critical zoological thought into a shifting vision that combined aspects of the subjective and the objective and situated in a particular body engaged with particular animals in a way that was only possible at the zoo. I tried to emphasise that the zoo, despite all its ingrained and epistemic problems, could also be a source of discovery if the terms of engagement were shifted.

After presenting, I was enthusiastically asked by the two conference organizers if I could, instead of submitting my finished work about staging national identity, compose a new essay,

which addressed the creation of the dance work I had screened. While I was initially disheartened by this request, as I assumed it indicated that my previous essay was substandard, I eventually realised that their interest indicated that my choreography was, in fact, a way to make a contribution that was both unique and substantial.

Adapting to an orientation primarily informed by artistic creation was initially strange, as I had intentionally entered my PhD to become a “serious scholar” (yet another virtual teleology), but adopting an artistically informed trajectory enabled me to leverage my bodily, creative, and intellectual skills, acknowledge my knowledge, and to avoid attempting to produce an interdisciplinary academic work, which, in all honesty, I might not have the specialized embodied skills, social opportunities, or particular philosophical knowledge to successfully bring to fruition. Thus, while my work is an intervention of sorts, it is also an acknowledgment about both my own limits and the reality that academic bodies are always contextualized and enskilled in particular ways through their own embodied experience of the world (Ingold 2000). To neglect acknowledging this is to promote both the production of knowledge and the creation of ideas divorced from tacit understanding (Polyani 2011 [1966]). I appreciate the patience demonstrated by my supervisor and all of my committee members while I gradually, and literally, “came to my senses” through my own research experience.

This dissertation, which I initially thought would be about a zoo, is probably more accurately about different artistic, quotidian, and speculative human and nonhuman choreographies. It constellates around the becomings and embodied epiphanies that unfold from an artistic engagement, which seriously considers thinking, sensing, and corresponding with real animals within a complicated contemporary place/space. In honour of the significant unpredictable and unforeseen sensory, imaginative, and physical differences that animals inflect



my life with this dissertation is comprised of certainly related, but sometimes divergent, lines of flight. Compiled together, they create a constellation of overlapping considerations and re-considerations of how animals, animal bodies, and animal movement can affect academic fields, conceptions of animals, quotidian urban sites, artistic processes, representations, and relationships with nonhuman life. Collectively, they embody the results of an orientation towards research that prioritizes risk over safety, lateral thinking over the production of definitive conclusions, and the generation of new connections over the confirmation of established ideas.

A variety of modes of research were utilized to generate questions, gather information, and to produce the written and choreographed components of this dissertation. Many of these are not visibly evident in this final product. In short, they include: close readings and textual analyses of literature from dance history, dance ethnography, natural history, ethology, animal studies, multispecies anthropology, posthumanist philosophy, and zoo studies; a survey of the many human-orchestrated animal choreographies present within digital media, embodied practices, and literature from science fiction; a brief participant observation experience with a pack of pariah dogs in Greece; an extended participant observation research experience with a cat named Boner; a field survey of specific Canadian, American, Mexican, and German zoological gardens leveraging digital, visual, and sensory modes of ethnography (Pink 2015 [2007], 2009; Hine 2015); a 2 year (averaging one visit per week) experiential study of the Toronto Zoo executed from a visitor's perspective; informal and often brief conversations with zoological professionals and artists; and, the creation of two zoomorphic choreographic works entitled *ARK* and *ARCHE*, which were the outcome of creative engagement with the maps, physical space and animal inhabitants of the Toronto Zoo and the Berlin Zoologischer Garten.

The following chapters are all outgrowths of the integration of this motley crew of research methods and experiences, and are, in one way or another, informed by aspects of my creative process. Chapter 1 is a literature review, which charts a chronology of critical zoo studies literature, identifies key figures, texts, and ideas, outlines the historical and intellectual territory of contemporary zoo studies, and traces features of its human landscape. Chapter 2 is a revision of the essay that I created for the aforementioned zoo studies workshop that acts as an entry point to understanding my experiential, embodied, and analytic engagement with the zoo. Chapter 3 is concerned with outlining the historical “zoo-dance” antecedents, critical ideas, intellectual inspirations, and creative processes related to the choreographic works *ARK* and *ARCHE*. Chapter 4 is a bestiary of bestial movement meditations developed using concepts that were encountered over the course of my research and deployed during the choreographic creation process. Chapter 5 is a series of five overlapping and “jumping” reflections of different lengths that embody the intellectual interminglings and entanglements that resulted from my creative engagement with *ARK* and *ARCHE*. They integrate ideas generated during the creative process with ideas “poached” (de Certeau 1988 [1984]) from dance studies, ethological, posthumanist, phenomenological, philosophical, and ethnographic literature. Chapter 6 is a meditation on Jakob von Uexküll’s concept of the *umwelt*, its adaption and practical application by Swiss zoologist Heini Hediger, and the many resonances between Hediger’s zoological thought and academic conceptualizations of dance as represented by an article entitled “Dancing Bodies” (1997) written by Susan Foster, an influential American dance studies theorist. Chapter 7 is a conclusion that refers to the philosophic ideas of Elizabeth Grosz, the divergent and convergent animal-and-dance research of ethnomusicologist Hollis Taylor and interdisciplinary scholar Jane C. Desmond, and two different speculative human-nonhuman constellations evoked

within the science fiction work of authors Jeff VanderMeer and Iain M. Banks as the means to reflect on orientations towards research, creation, and practice that lend themselves towards a process of becoming “unrecognizable” (Grosz 2010 [2007]).

## CHAPTER 1

*But what if you discover that the price of purpose is to render invisible so many other things?*

Jeff VanderMeer, *Area X* (2014)

### FOUNDATIONS (1980-1990)

The zoological garden has been a recognized scientific research site since its establishment in the eighteenth century but sustained critical consideration of the zoo by researchers approaching it as a *human cultural space* can be viewed as emerging in the last quarter of the twentieth century and operating in the shadow of the animal rights and ecological movements.<sup>4</sup> Early works by John Berger (1980), Edward G. Ludwig (1981), Dale Jamieson (2005 [1985]), Yi-Fu Tuan (1984), Harriet Ritvo (1987), and Bob Mullan and Gary Marvin (1987)—all different in orientation and emerging from different disciplinary environments—contest popular wisdom, balance evangelical accounts from zoo owners and zoo advocates, refute aspects of institutionally produced “Noah’s ark” narratives, and contribute to a re-evaluation of zoos as spaces affected and effected by a larger world that in turn affect and effect that larger world. They also, implicitly or explicitly, influenced the shape and direction of future research on zoos within the humanities by appropriating a specific domain, identifying key resources, laying critical foundations, erecting provisional scaffoldings, and paving certain avenues of thought (perhaps in some ways “colonizing” a territory of thought already inhabited by the “Other”). The specific scope of each author’s work is different, with Berger significantly influenced by visual art and Marxist theory, Ludwig by social studies and ethnography, Jamieson by ethics and animal rights philosophy, Tuan by geography, Ritvo by history, and Mullan and Marvin by cultural studies and sociology. However, their studies all specifically foreground

dominionistic aspect of the zoo while articulating them in relation to their own field's particular conventions.

The first, and arguably most well-known of these works is John Berger's "Why Look at Animals?" Part of a larger work entitled *About Looking* (1980), "Why Look at Animals?" is an assemblage of three separately published pieces that authorizes a specific reading of the zoo as a space of illusion and domination (Burt 2005). In "Why Look at Animals," Berger examines the disappearance of animals from human life, and the zoo—addressed directly in the second half of the work—is positioned as a symptom of modernity, capitalism, and imperialism and an "epitaph to a relationship that was as old as man" (21). Likening them to royal menageries, Berger describes early zoos as "endorsements of modern colonial power" (21) and "symbolic representations of the conquest of all distant and exotic lands" (21). Consequently, their animal inhabitants became mere tokens in "subservient diplomatic relations" (21). Part of a work on the marginalization of animal life, itself part of a work about the marginalization of human life under the long shadow of capitalism, Berger contests the idea of the zoo as a place where it is possible for "people [to] go to meet animals, to observe them, to see them" (21). Likewise, Berger de-emphasises the value of scientific studies performed at the zoo as they are either conducted under "unnatural conditions" (21) or naively claim to "discover more about the springs of human action" (22). Connected historically to the emergence of "realistic animal toys" and the "widespread commercial diffusion of animal imagery" and likened to "ghettos, shantytowns, prisons, madhouses, and concentration camps," the zoo under Berger's visual critique becomes "nothing else" other than "a demonstration of the relations between man and animal" (26). Through this depiction, the animal at the zoo is rendered unnatural and illusory, essentially a non-entity of no real value to science, culture, or individual zoo visitors. Central to Berger's

ideas is the concept of “looking” and Berger’s short commentary, although problematic in that its *vision* universalizes all zoos, all zoo visitors, and all zoo animals, and considers the zoo principally as a spectacle, becomes an influential re-visioning of a critically underexamined institution and one that is still referenced, often uncritically, within critical academic works (Burt 2005).

Less popularly celebrated than “Why Look at Animals” is Edward G. Ludwig’s “participant observation study of animal/human relationships at the zoo” entitled “People at Zoos: A Sociological Approach” (1981 310). Using research conducted at a “medium-size zoo” (310) before the publication of *About Looking*, “People at Zoos” offers a focused approach to the study of the zoological institution through its experiential examination of the staff, volunteers, and visitors of one particular American zoo. Nevertheless, many of Berger’s observations are echoed in Ludwig’s work, but without reference to Berger’s monolithic metanarratives of capitalism, imperialism, or colonialism. Ludwig gathers his information through volunteering as a docent, leading tours, observing zoo visitors, accompanying zoo employees during their work day, and informally interviewing zoo staff. Accordingly, his work is divided into three main sections that attend separately to zoo employees, the general public, and the “zoo context itself” (311). Throughout the work, Ludwig applies a detailed typology developed by social ecologist Stephen Kellert (Kellert 1976, 1980) to categorize different human orientations towards animals.<sup>5</sup> Ludwig’s deployment of Kellert’s typology allows the zoo to be depicted as a contradictory and diverse space, which attracts different types of individuals with surprisingly different perceptions of animals, and allows staff, volunteers, and visitors of the zoo to be socially differentiated from one another.<sup>6</sup> Like Berger, Ludwig characterises the zoo as a space of “little more than illusion” (316) but an illusion that, contra to Berger, is often shattered by the

“animals that look back at the viewer” (315). While absolutely critical of the zoo, and specifically noting animals’ lack of space, restrictions on behaviour and diet, and general boredom, Ludwig’s tone is definitively more hopeful than Berger’s dismissal of the entire zoological enterprise. When contemplating the contemporary state of the zoo he states that the:

most serious shortcoming that the zoo must overcome is its history, which conjures up such an image and creates expectations which have long been obsolete. Yet these expectations remain. People wish to see active animals, performing animals, roaring animals. They wish to see animals in their wild state, but under “unwild” conditions. (315)<sup>7</sup>

As part of Peter Singer’s collection *In Defense of Animals* (1985), ethicist Dale Jamieson puts forth another perspective about zoos called “Against Zoos” (2005 [1985]). Jamieson’s account is brief, and its tone is explicitly negative as it is designed to function as a diatribe against the existence of zoological gardens—explicitly stating that “zoos teach us a false sense of our place in the natural order” (143). “Against Zoos” is divided into three sections, all of which reference animal suffering and contribute ballast to Jamieson’s moral imperative that zoos must be abolished. Part one, entitled “Zoos and their History,” outlines the historical links between animal collections, displays of power, and animal suffering and implies that cultural progress beyond these antiquated modes of being can be measured by our treatment of animals. Part two, entitled “Animals and Liberty,” is a discussion of the moral “presumption against keeping wild animals in captivity” because their “liberty is severely restricted” and they “are deprived of a great many goods” including “gathering their own food, developing their own social orders and generally behaving in ways that are natural to them” (133). Jamieson reduces the complicated issue of animal captivity to the simple question: “Either we have duties to animals or we do not”

(133). Part three, entitled “Arguments for Zoos,” by far the longest section of the work, attempts to refute all the rationales that are commonly cited for the zoo’s existence: amusement, education, opportunities for scientific research, and preserving threatened species. Using scientific zoological literature on animal breeding, zoo education practices, and animal health, personal and professional observations about zoos, the aforementioned sociological studies conducted by Kellert and Ludwig, and historical information about animal mortality and animal suffering in zoo environments, Jamieson responds briefly and firmly to each claim. In so doing, he generates a litany of statements and questions about zoos routinely evoked by zoo abolitionists.<sup>8</sup>

In *Dominance and Affection: The Making of Pets* (1984), geographer Yi-Fu Tuan paints, with thick strokes, an image of “our tendency to dissociate power and domination from the world of pleasure, play, and art” (4). Concerned with making qualitative distinctions in the cultural use of power, Tuan distinguishes between two general types: “Dominance may be cruel and exploitative, with no hint of affection in it. What it produces is the victim. On the other hand, dominance may be combined with affection, and what it produces is the pet” (2). Defining the pet as the “inescapable” outcome of a “relationship of inequality” in which “affection mitigates domination” (5), Tuan sets out to examine the many “pets” of history—plants, animals, women, children, slaves, madmen, and the disabled—all interrelated and linked to “man’s role in changing the face of the earth” (5). Tuan emphasises the appearance of zoo-like spaces and arrangements across diverse cultures and throughout written history and draws parallels between the structure of the zoos and the shape of formal gardens as both were spaces where other forms of life were organized, cultivated, and displayed by human powers according to human scales and aesthetics. Tuan’s brief chronology of zoological history is prefaced by an examination of



animals as symbols of power in the belief systems and art of ancient China, Greece, Egypt, Mesopotamia, and during the Middle Ages in Europe. However, unlike Berger, Tuan focuses on the darker cross-cultural implications of this symbolic arrangement:

While in art and religion humans show an enduring tendency to see animals as the embodiment of power and as larger than life, in day-to-day existence they unhesitatingly dominate and exploit animals in myriads of ways. Even in art the aggrandizement of animals may be an indirect but highly effective means of exalting man. Rampant beasts are “captured” as art. (72)

Tuan outlines various fabricated “aggrandizements of animals” including “sculptural motifs on thrones and palace grounds,” “emblems on heraldic shields,” “mechanical wonders coated in noble metals and precious jewels” (72) and the considerably livelier processions of animals conducted in “honor of Artemis or Dionysus” and trained performing beasts of the Greco-Roman world (74). He also outlines the manner by which “tame and real animals of great value were on their way to becoming inanimate art objects” (75) through documenting lions gilded with gold, moray eels adorned with jewels and necklaces, and more recently, the use of beetles as “crawling forms of adornment” (75). In Tuan’s history these habits all lead towards the menagerie, “a discriminative trait of high civilization, combining as it does the desire for order with the desire to accommodate the heterogeneous and the exotic” (75-76). Tuan uses the terms “zoo” and “menagerie” fairly interchangeably, drawing attention to their similarities as spaces where animals were collected and displayed rather than emphasizing distinctions between their different sociopolitical origins.<sup>9</sup> Although separated by vast intervals of time and space and the products of separate and unique cultures, all Tuan’s examples become indicative of a *universal*

desire to collect, separate, spatially configure, cultivate, and display particular animal bodies according to human needs.

Having outlined the presence of zoos across cultures in history, Tuan focuses on the pleasures of the modern zoo, which emerge out of the “enlightened views of scientists at the end of eighteenth century and during the early part of the nineteenth century” (80). Like Ludwig, Tuan finds that, although the purposes of modern zoos are “straightforward and commendable, human experiences of the zoo are likely to be ambiguous and mixed” (80). No longer an outright display of royal or political power, the zoo now operates on a personal level by “providing an opportunity for visitors to appreciate the variety and splendor of nature, allows them to feel superior to the caged beasts and to acknowledge aspects of behaviour, such as eating and copulation, that they find disturbing and faintly disgusting when practiced by themselves” (80).

In *The Animal Estate: The English and Other Creatures in the Victorian Age* (1987), historian Harriet Ritvo discusses zoos within the broader context of Victorian sense and sensibilities towards animals at work and play within discourses on animal husbandry and agriculture, pet breeding, animal rights organizations, disease control, hunting, and zoological research. In all of these settings, within their specific conventions and amongst their divergent practices, Ritvo finds that “animals remained the symbols of various orders within human hierarchies, as well as the victims of human control” (41). More tightly focused than either Berger or Tuan and grounded in the information gathered from a particular era’s historic documents including journals, catalogues, autobiographies, minutes, posters, newspapers, visitors’ handbooks, letters, books, and institutional reports, Ritvo foregrounds how the Victorian zoo, specifically the Regent’s Park Zoo, in both theory and in practice, was “not just as popular symbol of human domination, but also as a more precise and elaborate figuration of England’s

imperial enterprise” (206). Under Ritvo’s treatment, this zoo is tracked from its foundation as an elitist space, conceived of as distinct from other contemporaneous fixed and travelling animal collections in England, which intentionally excluded the labouring classes to its eventual economically necessitated transition into a public institution offering social improvement for the masses. Part of her analysis is based on a critical examination of the designed topography of the Regent’s Park Zoo and she observes that:

The physical relation of the menagerie to the rest of Regent’s Park symbolically reiterated the association between its zoological richness and human privilege. Two rustic gates separated the scientific enclave from the larger tracts dedicated to strolling or to such frivolous diversions as the diorama representing the Roman colosseum. Immediately inside its segregated precincts, a terrace offered early patrons a chance to look down on those outside—as well as to admire views of the London suburbs—before beginning their promenade past the animals. The landscaping thus manifested official Zoological Society policy. (212)

Eventually, according to Ritvo, the spectacular novelty and performative prestige of the Regent’s Park Zoo waned and “attendance declined, and the society faced serious financial crises” (214). In response to this situation, the zoo council’s mandate shifted so that “anyone willing to pay the admission fee” (214) was admitted. Despite its economic necessity, this shift is also positioned as a beneficent gesture towards societal progress and as “an agent and an index of their improvement, and hence another symbol of English prowess and enlightenment” (214). Thus, the Victorian “emphasis on improvement was incorporated into the menagerie’s rhetoric of domination” as “visitors in need of refinement were figuratively assimilated to those who came to admire their own reflected glory” (215). Ritvo’s keen analysis of the Regent’s Park Zoo

contests the evocation of the modern zoo as an unequivocally progressive and benevolent theosophical enterprise and enunciates specific contradictory aspects of the modern zoological project intrinsically tied to constellations of science, nationalism and colonialism. In concert with the other subjects of *The Animal Estate*, Ritvo's zoo research contributes to an understanding of animals as fundamental mechanisms of popular and "enlightened" discourse and animate signifiers of the ingrained cultural distinctions writhing under the restrained and refined skin of British society.

The providence of Gary Marvin and Bob Mullan's *Zoo Culture* (1987) extends beyond the enchanted isles of Great Britain during the reign of the Widow of Windsor. The first singular work of critical cultural research devoted explicitly to zoos, *Zoo Culture* was undertaken "to understand the nature of the zoo, the processes involved in devising and maintaining the display of wild animals in captivity, and the viewing and response to such displays" and consequently is "an exercise in social and cultural interpretation rather than a simple criticism of the institution" (xi). The central thesis of the work is stated explicitly: "That the presentation of captive wild animals in the zoo reveals more about human societies which have constructed them—and whose members roam freely through them—than about the animals which are confined within them" (xiv). Marvin and Mullan divide their work into eight chapters, each one focusing on different aspects of zoos. The chapters repeatedly outline how specific uncritical claims made about and by zoological institutions were complicated by examining the specific human ideas and practices which structured "zoo culture." Chapter 1, "Humans in Animal Skin," discusses the overarching and problematic concept of anthropomorphism, its effects on representations of animals, and its applicability to animals in entertainment and zoo environments.<sup>10</sup> Chapter 2, "Containment and Control," focuses on examining power relations within the zoo and compares

and contrasts zoological spaces with other historical social spaces of captivity such as mental asylums and prisons, which “construct and define a total enclosed world for their member” (31).<sup>11</sup> Chapter 3, “Zoo Architecture,” focuses “precisely on that relationship between man and animals in terms of the physical structures in which animals are housed in captivity” (46) and emphasises that “the building of shelters for animals is a further example of the attempt to bring them within the sphere of human control and to shape the human experience of them” (47).<sup>12</sup> Chapter 4, “Exhibition,” examines the historical and contemporary<sup>13</sup> display practices of zoos, defining them generally as “exhibitions of human versions of the animal world” (68) where Western humans are “regarded as not part of the order of nature” (69)<sup>14</sup> as well as the historical display of humans within zoos.<sup>15</sup> Chapter 5, “From Princely Menageries to Public Zoos,” much as the title might suggest, discusses the “gradual shift from private collections for the pleasure and entertainment of the rich and powerful to collections designed and displayed for the pleasure of the paying public” (89).<sup>16</sup> Chapter 6, “The Cultural Status of the Zoo,” examines the historical convergence and divergence of public galleries, museums, and zoos, the educational mandates of the three institutions, and contrasts their respective collections in an attempt to understand their differently perceived cultural value.<sup>17</sup> Chapter 7, “The Animal as Commodity,” outlines the history of the animal as an object of Western trade and the development of the trading networks and breeding practices of zoological organizations which furnish zoos with animal bodies.<sup>18</sup> And, finally Chapter 8, “The Zoo in Evolution,” serves as a conclusion to the volume, and examines the complex social, cultural, and psychological factors involved in the “desire to conserve”(152).<sup>19</sup>

Bound together in one volume, the eight chapters that comprise *Zoo Culture* make a substantial contribution to the growing literature of human-animal studies and help establish the

field now known as “zoo studies.”<sup>20</sup> Like Berger, Jamieson, Tuan, and Ritvo, (and to a lesser extent Ludwig), Mullan and Marvin foreground the zoo as a space of ideological domination, and their reading is akin to light refracted through a prism—components of the zoological practice separate from one another and become perceivable according to their particular “hues” of domination. This spectrum burns deep into the pages of future scholarship of the field.<sup>21</sup>

## **PROJECTIONS (1990-2000)**

Nearly a decade after the publication of *Zoo Culture*, as the turn of the millennium slowly approaches and ethical arguments against the zoo begin to gain more popular traction through the efforts of organizations such as PETA, three new academic books on “zoo culture” are published. Each addresses the subject of the zoo from different angles, enlisting the lenses and methodologies of distinct academic disciplines: *Reading Zoos: Representations of Animals and Captivity* (Malamud 1998) examines the zoo through literary texts; *Zoo: A History of Zoological Gardens in the West* (Baraty and Hardouin-Fugier 2002 [1998]) elucidates a detailed and broad vision of Western zoological development; and *Staging Tourism: Bodies on Display from Waikiki to SeaWorld* (Desmond 1999) examines staging practices involving human and animal bodies at touristic sites. Using the disciplinary scaffolding erected by Berger, Tuan, Ritvo, Ludwig, Jamieson, these three authors focus and define aspects of Mullan and Marvin’s quasi-moralistic spectrum of domination with increased clarity.

Malamud’s *Reading Zoos: Representations of Animals and Captivity* (1998) examines the appearance of the zoo within modern literary contexts and representations of animal captivity within a diverse collection of literary works. Malamud’s primary sources are iconic and lesser-known works of poetry, drama, and prose.<sup>22</sup> Malamud’s detailed readings of these texts address, in separate chapters, the subjects of animal confinement, animal pain, spectatorship, voyeurism,

and zoophilia, children and zoos, and, the zoo as a symbolic backdrop within narratives.

Approaching the works from an explicitly zoo-abolitionist perspective influenced by animal rights literature like Tom Regan's *The Case for Animal Rights* (1983), Malamud's survey—as with much literary criticism—finds exactly what it was looking for as the author consciously leverages his damning analysis of fictional zoos to produce a diatribe against real captivity.

Eric Baratay's and Elizabeth Hardouin-Fugier's 1998 *Histoire des jardins zoologiques en occident (XVF-XX siècle)* (published in English in 2002 as *Zoo: A History of Zoological Gardens in the West*), is a historical examination of Western zoological garden history, with a focus on Europe, Great Britain, and, to a lesser extent, North America. Meticulously researched using a trove of international historical documents and accompanied by multiple illustrations, photographs, and architectural diagrams, the comprehensive study fleshes out the provisional history outlined partially in Berger's, Tuan's, and Mullan and Marvin's accounts. In doing so Baratay and Hardouin-Fugier create a genealogy that traces the development of the contemporary zoo from its menagerie origins. The intent of the book is to:

shed light on humanity's view of wild animals in the context of the zoological garden—approached as a perfect laboratory—while considering the concepts, customs, and intellectual interactions relevant to the history of zoos, in an effort to understand why human beings keep wild species near them in enclosed spaces, and why these spaces are so attractive to the curious. (10)

Unlike Tuan, Baratay and Hardouin-Fugier find that the “answers to these questions vary according to period” (10) and consequently they organize their historical study into three main time frames,<sup>23</sup> each characterized by specific cultural preoccupations, values, and interests. The gross generalities of previous histories are replaced with a detailed chronological account that

focuses on the specific initiatives, accomplishments, and actions of individuals—zoo directors, zoo designers, zoo keepers, animal traders, and animal trainers—and the networks created between these individuals, which permit trade, the exchange of information, and collaborative endeavours. Although the development of the zoo is still referenced as being propelled by the cultural forces of imperialism, colonialism, and capitalism, these monolithic metacultural paradigms are rendered substantially more salient through a diachronic contextualization and discussion of significant events, historical figures, and major institutions.

Jane Desmond addresses the display of animal bodies in the second half of *Staging Tourism: Bodies on Display from Waikiki to SeaWorld* (1999). Her social constructionist analysis is an elaboration of Raymond William's figuration of conservation as the ideological double of exploitation (147), and John Berger's observation that "part of our fascination with animals is a result of their similarity and difference from ourselves" (149), which recharacterizes the zoo as the "kinaesthetic embodiment of an imperialist eye" (145). Focusing on different manifestations of the *culture of nature*, Desmond contends that "our visual observations of physical difference form the bedrock for concepts of social and psychological difference" (149), and that "whenever we talk about animals, we talk of ourselves, for the presentation of nature is simultaneously a buttressing or critique of certain conceptions of cultural practice which the animals are compared with and contrasted to" (149). Influenced by Alexander Wilson's *The Culture of Nature: North American Landscape from Disney to the Exxon Valdez* (1991), Desmond focuses her attention on the staged performances of living animal bodies and the construction of "natural" animal behaviour as phenomena propelled by the "consumption of radical body difference" (144).<sup>24</sup> According to Desmond, what these bodies demonstrate is not natural behavior but "a false realism based on the material presence of the body divorced from a



full range of bodily practices” (150) as well as the animal’s unknowing complicity in their “ultimate domination by and dependency on the humans who have captured or bred them” (151-152).<sup>25</sup> Although Desmond’s analysis of looking at animals in captivity constellates around the opinion that all experiences of animal bodies are always fabricated in one way or another by human culture and founded on domination of different degrees, she emphasises the flexibility of this arrangement<sup>26</sup> and outlines a “history of exhibition styles” comprised of four eras of modern zoo design (160).<sup>27</sup> Desmond also offers a provisional zoological differentiation theory based on “a gradated range of similarities to and differences from human bodies” that present “greater or lesser possibilities for anthropomorphization and spectator identification” (166). Like Mullan and Marvin, Desmond postulates that zoological spaces are often structured around animals whose “biological structure is *comprehensible* to us in a way that other animals are not” (167). Thus, mammals are “the arena where the most intense preoccupations with the nature-culture divide” (149) is enacted because of the range of attributes that could be associated with them.<sup>28</sup>

Desmond, like many previous interlocutors of the zoo, focuses on revealing the camouflaged culture of the display of both humans and animals, the utopian “nature” insidiously entwined with notions of the nuclear family, masculinity and femininity, heterosexuality, capitalist economics, and neo-imperialism. However, her analysis also indicates the importance of “bodily display and action,” the status of viewers as “literal and metaphorical actants” (252), the possibility of applying dance-informed analysis to the contemporary performances of nonhumans, and perhaps most importantly, the possibility that “the gaze” could be extended “to include other senses of perception” (252). Thus, “looking” at animals at the zoo can also “imply a physicality and merging” (146) and hence, is always already more than just a Bergerian visual spectacle.



## **ELABORATIONS AND INTERVENTIONS (2000-2019)**

In the twenty-first century, the zoological scholarship generated by academics has reached what might be termed a critical mass. A broad range of literature is clearly visible and, while primarily comprised of works which seem projected from the light of Mullan and Marvin's prismatic visualization of the zoological endeavour, there are also works refracting past observations and revealing previously invisible wavelengths of "zoo culture"— tones rendered sensible by contemporaneous scholarship on the Anthropocene, human-animal studies, and posthumanism. Critical historical accounts of zoo culture abound as scholars discover gaps in previous accounts and narrow their foci in order to fill specific niches, such as the historical development of particular institutions (Kisling 2001; Mehos 2006; Koenigsberger 2007; Nyhart 2009; Ito 2014; Andreassen 2016; Bender 2016; Grigson 2016; Bruce 2017). However, nuanced examinations of other facets of "zoo culture" are also being produced by scholars who provide sociological, philosophical, legal, ethical, design-based, feminist, queer, and even speculative treatments. Appearing as whole books, or as essays in collected editions and academic journals, the domain of zoo studies is still marked by the work of certain figures but transforming as it absorbs new interdisciplinary perspectives and generates more complicated and colourful visions.

Nigel Rothfel's *Savages and Beasts: The Birth of the Modern Zoo* (2002) examines the life and legacy of venerated and villainized German animal trader and "father" of immersive zoological design Carl Hagenbeck. Refreshingly, his measured study is situated on a historical river flowing between "two camps" that "have developed around the issue of the significance of zoological gardens." For the residents of one camp, the "gardens of the nineteenth and twentieth centuries represent a genuine interest in the animals expressed in a desire to learn about them"

(22); in the other camp, residents have “sought the persistent presence and development of certain social, political, and economic forces behind all collections of animals” (22).

Recognizing that these “two approaches, of course, yield rather different stories about the meaning of various exhibits at zoos” (22), *Savages and Beasts* navigates this hazardous course and narrates a more complicated story in which Hagenbeck’s success was the outcome of the intersection of multiple complicated historical and individual forces. According to Rothfels:

Carl Hagenbeck did not become the leading animal dealer in the world simply because he loved animals. He became so because of his extraordinary business sense, the accelerating growth of a market for the animals, his location at one of the hubs of international exchange, his carefully nurtured contacts in the zoological garden and circus world, his desire to bypass the traditional lines of bringing animals to Europe by sending his own catchers into the field, and his plain hard work. (203)

Rothfel’s more ideologically neutral stance generates a vision of Hagenbeck that is historically situated and specific in its appraisal of the latter’s legacy of collecting, trading, and exhibiting both animal and human subjects. It also generates a vision in which the insidiousness of historical and contemporary immersive zoological practices is acknowledged but also critiqued as complementary to animal-focused media (such as nature documentaries) usually regarded by zoo detractors as benign alternatives to the zoo experience. For,

Hagenbeck’s revolution was not really about the moated structures he created.

Hagenbeck’s revolution was precisely the narratives of freedom and happiness he developed at his zoo to go along with the newer exhibits. Before Hagenbeck, zoological gardens often struggled to convince the public that it was not so bad to be an animal at

the zoo. Beginning with Hagenbeck, the gardens began finally, and more or less successfully, to renarrate the captive lives of animals. (199)

Slightly more conservative in its approach is Elizabeth Hanson's *Animal Attractions: Nature on Display in American Zoos* (2002), which outlines the history of American zoos and emphasises some of their fundamental differences from European and English zoological institutions. Hanson links zoos in American to "the transition of the United States from a rural and agricultural nation to an urban and industrial one" (5), identifies social reform and discourses of civility and morality, rather than scientific discourse, as a primary driving force, and focuses on the importance of the American urban public parks system, zoological funding through publicly solicited donations, the animal contributions of naturalists and other members of the public, and the literary influences of American wilderness figures and authors. Foregrounding differences between European and American Zoos, Hanson, like Baratay and Hardouin-Fugier, contests past univocal theories of zoological development in favour of a more regional approach and thereby provides visibility to unique American figures, sentiments, and developments. Although favouring larger institutions such as the Philadelphia Zoo, the National Zoo, the San Diego Zoo and the Bronx Zoo, Hanson's history specifically acknowledges the contributions of American men and woman that had been overshadowed by their European counterparts and consequently, have been underexamined or unacknowledged in previous zoological histories.

One of the more unconventional approaches to the examination of zoos is philosopher Keekok Lee's *Zoos: A Philosophical Tour* (2005)—a "philosophical exploration of the concept of zoos, not, however, from the usual ethical angle of either animal welfare or animal rights, but from the ontological standpoint" (1). Her work resolutely challenges the claim that zoos are places that display wild animals and simultaneously contests both the educational and

conservational rationales for zoos and the guiding logic of the species management policies “advocated by the ‘World Zoo Conservation Strategy (1993) and the European Union Zoos Directive (1999)’” (1). Lee is not interested in abolishing animal captivity and she focuses almost exclusively on the contradictory nature of zoos. Quite astutely, she recognizes the possibility of some animals benefitting from zoological captivity, concluding with the counterintuitive observation “that although zoos (via *ex situ* conservation) may not be truly relevant to the project of saving extant threatened wild species from extinction, they, unwittingly, play a role in adding to biodiversity—though not of the natural kind—by nurturing and creating, in the long run, new immured, artefactual species” (4). Ontologically, zoo animals are “not wild, nor are they domesticates in the classical understanding of domestication” (1), and, neither are they “tokens of wild species” (1) but rather “artefactual species” (1). As evolutionary beings, the animals at the zoo are no longer “natural,” as they are living in miniaturized and simulated environments, unable to exercise independence in terms of sexual choice, deprived of the ability/responsibility to procure food and shelter for themselves, and not subjected to disease or death by natural factors. Instead, they are anthropogenically “suspended” (56) within human culture. Thus, animals at the zoo become biological artefacts that humans are consequently responsible for. As an extension of her previous work *The Natural and Artefactual: The Implications of Deep Science and Deep Technology for Environmental Philosophy* (1999), *Zoos: A Philosophical Tour* challenges assumption about human contact with the natural world and insists the value of other entities is in their ontological independence and that human attempts to remedy environmental issues (such as animal species extinction) merely transforms formerly independent entities (with their own ontological trajectories) into artefacts of culture that are managed. The risk of such endeavours is that a generalized humanity will, eventually, be unable

to distinguish itself from its creations, or, perhaps more importantly, to grasp a universe predicated on difference. Although not specifically referencing the term “Anthropocene,”<sup>29</sup> the hallmarks of its recognition as an ontologically troubling prospect for a world inhabited by diverse forms of life are indelibly written all over the document.<sup>30</sup>

Eric Ames’s *Carl Hagenbeck’s Empire of Entertainments* (2009) focuses, like Rothfels’s work, on the figure of Carl Hagenbeck, but strives to situate Hagenbeck as, not only important to zoological immersive design, but also as central to twentieth century immersive tendencies manifesting in popular culture and entertainment. Focusing on the historical emergence and evolution of Hagenbeck’s methodology of simulation and its vivid contrast with anthropological and zoological methods of display, exhibition, and engagement that preceded it, Ames positions Hagenbeck as an underacknowledged cultural pioneer and a progenitor of the cinema, contemporary amusement parks, visions of global culture, and contemporary modes of curation in which spectators not only *see* a fictional world, but are brought *inside* one.<sup>31</sup> Ames’s work also addresses Hagenbeck’s history of human display and accents how his spectacles, rather than reifying existing conceptions of “primitive” people, contests colonial propaganda and ethnographic exhibits stipulating that “‘nature peoples’[sic] were absolutely different from ‘cultural people’” (93).

*Metamorphosis of the Zoo: Animal Encounter after Noah* (2010), edited by Ralph Acampora, offers a speculative and even creative approach to zoo studies and assembles a diverse collection of new and reprinted works written by an interdisciplinary team of academics for the purpose of revisioning the zoo and reimagining future interspecies encounters. The introduction positions humans as harbouring strong biophilic tendencies theorized by sociobiologist Edward O. Wilson (2003 [1984]) and the zoo is framed as one regrettable

consequence of these innate tendencies. Consequently, the collection is a “compendium of critical interventions that envision novel modes of authentic encounter that might cultivate humanity’s biophilic tendencies without abusing or degrading other animals” (1-2). The works are intended to “either radically restructure what were formerly zoos or else map out entirely new, post-zoo sites or experiences” and thereby contribute “to moral progress on the interspecies front and to ecopsychological health for a humankind whose habitats are now mostly citified” (2). These “zoötopian visions” (2), while leveraging the work of past zoo scholars, also articulate a new orientation towards zoological scholarship, one influenced by relational philosophy, ethological literature, animal cognition studies, decolonial theory, and science and technology studies. Within this conceptual paradigm, the ideas of Gilles Deleuze and Felix Guattari, Donna Haraway, Karen Barad, Elizabeth Grosz, Barbara Smuts, Homi Bhabha figure prominently. Accordingly, contributions often focus on themes of intersubjectivity, interaction, decolonization, and nature-cultures and place greater value on ethological observations, greater attention on the actual bodies, intentions, and movements of animals, and greater credence in the possibility of the future transformation, rather than the wholesale abandonment, of both the zoo and other encultured experiences with nonhumans. The individual contributions of Randy Malamud and Bernard Rollins remain resolutely abolitionist in tone with the former’s “Beyond Zoos: Marianne Moore and Albrecht Dürer” (2010) impotently championing textual and literary animal encounters, and the latter’s “Through a Frame Darkly: A Phenomenological Critique of Zoos” (2010) enunciating, partly by means of a reflection on the author’s privileged participation in a touristic African safari, the belief that remote viewing via video cameras is an adequate substitute for the zoo experience. In contrast, the majority of other contributors to the volume gesture towards grandiose projects of remapping social, communicative, physical, and



intellectual relations with animals that re-orient humans' biophilic impulses. In these speculative visions, aspects of contemporary zoos are not only deplorable historical relics, but also portals leading towards unique and more equitable interspecies futures. However, many of these contributions also share a certain saccharine consistency through their articulation of *prescriptive* utopian recipes. In order to adequately characterise their basic arguments important features of many of these essays are outlined below.

In "Zoos as Welfare Arks? Reflections on an Ethical Course for Zoos" (2010), Koen Margodt interrogates the efficacy of zoological conservation programs and probes institutional rationalizations for keeping and breeding animals in zoological captivity. Finding glaring logistical problems with both the overall number of species and diversity served by zoological initiatives, and issues with zoos' practical track record of direct and indirect conservation efforts, Margodt concludes that zoos cannot rationalize their existence based on their conservation records or their future projections of significant conservation potential. In response to this situation, Margodt suggests "meaningful" conservation results can "be obtained when working from an entirely different kind of zoo philosophy" (21), one concerned with individuals rather than species that is the "only justifiable course for zoos" (32). This "different kind" of philosophy is Margodt's concept of the "welfare ark" (otherwise known as a sanctuary), an institution imagined to "bring an invaluable contribution by helping individual animals in their care" and to "play an important indirect role of support to the conservation of threatened species in the wild by informing the public, raising funds, and sharing technical experience (such as sedation methods for translocating animals in the wild)" (31). Welfare arks' focus on animal well-being necessitates significant changes to zoo infrastructure. They "require that zoos give up the idea of assuring their own future through the breeding of nonthreatened species," "allow for

far more flexibility in helping animals,” and “mean that animals be allowed more privacy and visitors stay more at a distance (though this does not necessarily imply no visitors should be allowed at all)” (31). The resulting institutional framework, according to Margodt, is logically more “credible” and will garner the “support of many people and organizations because it combines the aim of protecting the interests of individual animals (both in captivity and beyond) with that of conserving species in the wild” (32).

Similarly, in “Nooz: Ending Zoo Exploitation” (2010), Lisa Kemmerer evokes “nooz” as zoological improvements—new spaces fashioned from the remnants of zoological gardens that were “nonexploitative, benevolent,” and “*designed for nonhumans*, to provide safe-haven for those individuals who have been misused by zoos or science or injured by humans” (37). “Nooz” assesses the “damage that is inherent” to captivity in zoos, where nonhuman animals are confined “*for human beings*” (37). Kemmerer outlines this “damage” by looking at the conditions animals are kept in at zoos and the institutional educational and conservational goals that are related to their captivity. Kemmerer believes that: the spatial restrictions of large mammals in zoos are “akin to a human locked in a single-car garage, with an open top, a few toys, and food and water, for the rest of their life” (40); the final outcome of captive breeding programs is that released “animals fall victim to the same fate as their endangered ancestors because of the ongoing and core human problems of overpopulation, greed, and indifference” (44); and the breeding of prey species is a situation where zoos provide “prisoners with flesh from the bodies of animals who are perfectly healthy, and who would have contentedly gone on living, had they not been killed to feed zoo prisoners” (52). In contrast, inside her fictional nooz, (places also modelled partially on contemporary animal sanctuaries), residents have:

spacious, natural areas in which to live, as natural as possible, and they will live for their own sakes. Nooz will only keep carnivores if they can be fed on roadkill or corpses. Nooz will help both children and adults to learn that nonhumans must not be caged or exploited for our profit, entertainment, or education. (54)

Clearly affected by many of the moral imperatives of the animal rights movement, both Kemmerer and Margodt evoke similar visions of new institutions dedicated to care, respect, and even atonement, built on the bones of the zoo but fashioned from very different intentions.

In “Zoöpolis” (2010), Jennifer Wolch imagines urban spaces “not rooted in conquest and exploitation of nature by culture” (222). Wolch’s “Zoöpolis” seeks to remedy capitalism’s and urban theory’s “disregard for nonhuman life” (221) by foregrounding “an urban theory that takes nonhumans seriously” (222) informed by an “ecosocialist, feminist, antiracist urban praxis” (222), “the recovery of animal subjectivity” (224), and the “webs of kinships and difference that shape individual identity and involve both humans and animals” (225). “Zoöpolis,” visualized by Wolch as the opportunity to “renaturalize cities and invite the animals back in, and in the process re-enchant the city” (226), is a multifaceted and extremely dense concept, which includes: a “deeper understanding of human interactions with the city’s animals” (231); an exploration of “how the deeply ingrained dualism between city (culture) and country (nature); as it is played out ontologically, shapes human-animal interaction in the city”(232); a querying of “the role of diverse cultural norms regarding animals in the racialization of immigrant groups and spread of nativism in the West” (232); the reconceptualization of “cities as ecological disturbance regimes rather than ecological sacrifice zones whose integrity has been irrevocably violated” (233); the incorporation of “heterogeneity and variable patchiness of urban habitats and the possibilities (rather than impossibilities) for urban animal life” (233) into ecological analyses; a scientific

ecology not “grounded in instrumental rationality and oriented towards environmental control”(233) but rather a “self-reflexivity in ecological research on urban animals and ecological toolkits augmented by rich ethnographic accounts of animals, personal narratives of non-scientific observers, and folklore” (233); an “evaluation of the technical merits of urban wildlife studies” (233-234) and a complementary “analysis of how they are framed by epistemological and discursive traditions in scientific ecology and embedded in larger social and political-economic contexts” (234); the extension of “networks of caring and friendship to nonhuman others” (238); the activation of “situated ethics, coalition building, and formation of strategic alliances” (238). Although “Zoöpolis” is definitely not a usable manual for creating or encouraging concrete change, it is an informed challenge to urban planners, daring them, if they can absorb the density of its nuanced ideas, to consciously address the complexity of a multispecies city.

In “Respectful Stewardship of a Hybrid Nature: The Role of Concrete Encounters” (2010), Chilla Bulbeck explores the deep benefits of human-animal contact at sites (including zoos) where “we can learn to feel the natural world differently, not as a place to express our rejection of the feral other, or our yearning for oceanic connection with the mother” (96). Bulbeck’s proposal for a “respectful stewardship of a hybrid nature” (90) is neither zoo-abolitionist nor zoo-apologist in orientation, and “attempts to dissolve such stark oppositions, to *combine* management and awe, mind and heart, and even, where necessary, nurture and conquest” (90). Her approach does not call for a “rejection of our scientific knowledge of animal behavior or of climate change” (91) but argues that any approach “should be combined with the equally valued understanding that comes from embodied experiences of specific tracts of nature” (91) and “putting ourselves in the other’s place, seeing the world to some degree from the

perspective of another with needs and experiences both similar to and different from our own” (92). According to Bulbeck, the concept of hybrid nature “suggests that there are no animals left on the planet that exist entirely ‘by themselves’ and very few whose existence ‘for themselves’ is not constantly interrupted by human intervention, whether the interruption is intentional or not” (93), and “accepts the vast imbalance in power and destructive potential between humans and the rest of the world” (93). Thus, hybrid nature “calls for constant debate concerning the extent of intervention that will best meet the needs of nature and of humanity” (93) and respectful stewardship is “not a result, but a process, an active debate which we must come to with as much honesty and integrity as we can” where “we have more duties than rights” (93). Bulbeck’s work is marked, not just by radical ideas, but by a radical empathy, one which gives value to experiences with animals and forums for animal encounters that many other scholars reference as noxious.

Similarly generous is David Hulka’s “Boring a Wormhole in the Zoological Ark” (2010), an essay in which the author attempts to refashion the structure of the zoo in order to privilege animal *mobility* over anthropocentric *optics*. Under Hulka’s direction, the static and compartmentalized zoological garden becomes an “open-ended form of environmental enrichment and environmental inheritance” (144) emphasising animal “welfare *and* agency” (143) over “ecological emphasis on conservation” (143). A place encouraging multi-dimensional, multi-species locomotion where animals “utilize their natural ability to engage, explore, and (more simply) make contact with surfaces” (143-144), Hulka’s ever-shifting choreographic assemblage is a pragmatic acknowledgment of the reality that “the overwhelming majority of zoo animals will never be transferred back to nature and that those returned will

inevitably encounter natures that have been already substantially transformed” (143).

Significantly, Lulka, unlike other contributors to the zoo discourse, acknowledges that:

At a very fundamental level, zoo managers are unable to contain (that is, control) the animacy of animals in any absolute sense, for at the scale of the body (and the various subregions within) zoo animals retain a capacity for agency and action despite their enclosure. More precisely, the process of organismal development, which is the essence of life, is not wholly dictated or regulated by human caretakers. Indeed, as I will show, some of the problematic behaviors exhibited by zoo animals reflect the inability of humans to fully grasp the nonhumans in their command. (123)

A fascinating essay, equal parts interpretive, speculative, and practical, aspects of Lulka’s fabulous but possibly executable kinetic vision are evident, albeit in less ambitious form, in current and future zoological projects such as Jon Coe’s *Zoo360 Animal Trackways* at the Philadelphia Zoo (Worland 2017).

In “Whale and Human Agency in World-Making: Decolonizing Whale-Human Encounters” (2010), Traci Warkentin and Leesa Fawcett address, through a queer/feminist/decolonial approach, how the zoo’s structure encourages witnessing “representatives of a particular species” (104) rather than meeting individual subjects. Consequently, in “the zoo’s process of preserving the species, we misplace the whole animal and all the lived complex inter-and intra-action” (107). Their staging of a “mutiny on the zoological ark” (109), is enacted with reference to real-world examples of human-whale relationality, encourages recognizing the complexity of multi-species relations, generates choreographies of “response(ability)” (113) that unfold through “*transformative* encounters” (117) in “contact zones” characterised by “reciprocity and choice (115), creates opportunities for participatory

“world-making” (118), and accepts “the risk that, given the choice, some will not come to meet us” (118). Warentin and Fawcett’s essay is both ambitious and disappointing. I agree emphatically and intellectually with many of their ideas, including their canny analysis of the de-subjectifying nature of the zoo. However, I cannot ignore the reality that many of the institutions and programs they use as case studies are economically unviable possibilities for many potential spectators, and that consequently, there is the possibility that their queer/feminist/decolonial lens blinds them to their own privileged positions and perhaps even disenfranchises altern human subjects even more spectacularly than the public zoo itself.

In “Earth Trusts: A Quality of Vision for Animals?” (2010), Helena Pedersen and Natalie Dian evoke a speculative vision of environmental stewardship “based on the methodological tools of the interdisciplinary research area of futures studies” (172) and is “a way of pointing out possibilities for alternative, counterhegemonic human-animal futures in general, and post-zoo futures in particular” (188). Their vision unfolds in the year 2035 in the form of the “Earth Trust” (177) concept, an outgrowth of “twenty and twenty-first” (178) ideas which figured the zoo “as barbaric, and a gross invasion of animals’ rights to live autonomous lives” (178). Created through “the merging of national parks, national forests, botanical gardens, and zoos,” Earth Trusts are located on tracts “of land having particular qualities which scientists and the general public find contribute to the greater environmental system such as water shed, mountain forest, jungle, or desert landscapes,” of “irregular shape” and connected to “another green area” (178). At their centre is “a great diversity of animals, plants, and insects that are native to the area” (178). Created by “negotiations between” scientists and naturalists, “no one but scientists can go into the Earth Trust central core,” but visitors can travel “to the perimeter,” to the “edge of the ring around the protected area” where they can “see the animals that wander to the edge of the

Trust” (179). Pederson’s and Dian’s vision of the future is epic in scale, yet eerily detached from pragmatics. Although their modelling is indeed based on contemporary projections of species decline and ecological devastation, their vision fails to adequately account for the process of how exactly people make the necessary perceptual shift towards respecting nature to the extent that they emphatically welcome their bodily exclusion from it.<sup>32</sup>

In contrast to the many utopian visions of *Metamorphosis of the Zoo*, Irus Braverman’s *Zoo: The Institution of Captivity* (2013) rearticulates the domination of animals at the zoo by interpreting modern zoological practices as examples of Foucault’s concept of “pastoral power” operating in a multispecies context (Braverman 2013).<sup>33</sup> Articulating the zoo as a biopolitical space of care, rather than only a crudely disciplinary place, Braverman’s study emerges from ethnographic research, numerous interviews with zoological administrators, managers, activists, and critics, and detailed study of zoological practices, spaces, cooperative agreements, schematics, and regulations. Braverman’s research draws on “three defining characteristics of Foucault’s pastoral power to illuminate the working of contemporary institutions of captivity:” “First, Foucault asserts that pastoral power is fundamentally a beneficent power: a power of care” (21), “Second, pastoral power is exercised over a flock and thus over a multiplicity of movement” (22), and, “Third and finally, pastoral power is an individualizing power” (22). Although Braverman’s study does provide a short zoological history, its primary focus is outlining, in a detailed fashion, how the various collective “governing” mechanisms of the international, networked, contemporary zoological enterprise (including naming, classifying, cataloguing, tracking, recording, exhibiting, regulating, breeding, conserving, etc.) are manifestations of pastoral power (187). Thus, her study is simultaneously a challenge to conceptualizations of power outlined in previous zoological studies and an extension of



“surveillance theory beyond its more traditional focus on humans” (191). Her conclusion emphasises that “the project of governing animals has significant implications for humanity” and “was intimately related to the project of governing humans” (192).

Like *Zooland*, Lisa Uddin’s *Zoo Renewal: White Flight and the Animal Ghetto* (2015) emphasises the interpenetrating cultural contexts of animals and humans through its examination of the links between American zoological revitalization projects and urban revitalization projects. However, unlike Braverman’s more optimistic study, Uddin’s focuses on the underbelly of the zoological renaissance, in particular, its racist enactment of renewal and tangled links to “distinctly Anglo-American” (10) ideas of wilderness and purity. Although highly informed by contemporary animal studies and posthumanism, Uddin’s work is skeptical about their “infectious hope” (8). Thus, her study is, in some ways, a refrain of “‘old’ possibilities—historical problems, really—laid out by social constructionist frame-works” (9). *Zoo Renewal*’s examination of historical, architectural, photographic, and textual documents exposes a rhetoric of “whiteness” operating within diverse American ecologies: The post-World War II textual and photographic depictions that situate zoo animals in the context of the “naked cage” (46) and liken animals to “second class citizens” (66) and “city dwellers” (70), and produce “white liberal shame” (56); intertwined discourses of “animality and blackness” (74) operational in 1970’s “slum clearance” (71) projects in Washington D.C. and the revitalization of the Washington National Zoo’s “zoological slum” (76); the figure of Mohini—the National Zoo’s now deceased female *white* Bengal tiger with distinct exotic Orientalist trappings; and, the ideologically inflected conceptual design, creation, and conservation initiatives of the suburban San Diego Wild Animal Park in California. Persuasively argued, Uddin’s work pivots around unearthing how “inflections of innocence and virtue” (217) which saturate modern zoological design and

conservation discourses, camouflage “different uncertainties of being, becoming, and staying white” (221).<sup>34</sup>

Published the same year as Uddin’s study, David Grazian’s *American Zoo: A Sociological Safari* (2015) is based on an immersive ethnographic study of zoos based on four years of volunteer work at two different institutions, field work with his son at “twenty-six AZA zoos... including some of the nation’s most prominent metropolitan zoos, aquariums, and marine mammal parks” (12), and interviews with “a wide range of key informants and stakeholders in the zoo world” (12). Grazian’s approach is considerably affected by a particular interpretation of the Anthropocene stating, “as the Earth itself, the zoo’s environment is a result of human engineering, and its unintended consequences” (13-14). This perspective, one in which nature is always “a cultural construction organized by human imagination and experience” (5) marks one difference between Grazian’s conception of nature and that of many of his predecessors who often perceived clear distinctions between human culture and animal nature. It is also arguably the means by which Grazian elides engagement with facets of zoo culture that his predecessors found problematic. Correspondingly, Grazian is less invested in the subject of dominance or control and viewed the zoo as “an ideal social world for examining the cultural construction of nature in the age of the Anthropocene” (18). Like Ludwig’s ethnography, Grazian’s study is deeply invested in the human perspectives of both contemporary zoological workers *and* visitors and consequently his critical assessment of different aspects of the zoo is balanced by his ethnographic experience and knowledge of the particular institutional, practical, and social logics, which inform zoological design, animal care, education, display, and conservation efforts. This approach lends itself to a vision of the zoo which is “multiple and contradictory” where the

“human participants” must “publicly grapple with the complex issues surrounding the captivity of their animals” (215).

Promoting this vision, Grazian’s study often contrasts public and professional criticisms of the zoological project with the intense physical, emotional, and intellectual labour performed by zoo workers on behalf of animals, and consequently finds the zoo to be an evolving space where workers are consciously attempting to, as Donna Haraway might put it, “stay with the trouble” (Haraway 2016). Interestingly, Grazian highlights the irony that zoo advocates and zoo abolitionists are both joined together *and* separated by different culturally mediated forms of empathy for animals. Leveraging this shared empathy as a portent sign of current engagement and future possibilities, Grazian’s zoo emerges as a space of unlimited potential.

## **RESPONSES AND REACTIONS**

In “Why Look at Animals?” (1980) John Berger states that:

the public purpose of zoos is to offer visitors the opportunity of looking at animals. Yet nowhere in a zoo can a stranger encounter the look of an animal. At the most, the animal gaze flickers and passes on. They look sideways. They look blindly beyond. They scan mechanically. They have been immunized to encounter, because nothing can any more occupy a central place in their attention. (28)

There is some truth in this observation, just as there are truths to be found in every text that comprises zoo studies literature. All of these many truths, however, are only valid from certain perspectives. At the Toronto Zoo there is a species of animal called a Matschie’s tree kangaroo that is exhibited in the “Australasian” area. Every time I would pass by this exhibit I found the tree kangaroo facing away from me and coiled into a small ball. After seeing the animal in this

position and location on more than ten occasions I assumed it was living proof of the veracity of John Berger's statements. However, one day I departed from home to get to the zoo early and arrived just as the zoo was opening. Walking by the tree kangaroo's exhibit, I was met with a surprise—the creature was not inert or despondent but quite lively. It was bounding around and interacting with its keeper, a woman who was definitely encountering the “look of an animal” (28). The tree kangaroo's gaze did not flicker or pass on, nor did it “look sideways,” “blindly beyond,” or “mechanically” at this woman (28). It looked *at* her intently as it nuzzled into her. During that moment, much of the force of John Berger's argument dissipated. Speaking to the keeper shortly afterwards, she informed me that there were, in fact, two different tree kangaroos, and each, during different times, occupied this exhibit, but both tended to nap during the day in the same hammock after they had been fed. After this revelation, I began to trust my own assumptions and the assumptions embedded within the zoo studies literature a bit less.

Over the next months I intentionally began to visit the zoo at very different times and paid much closer attention to the relations between the animals and the keepers. I noticed more animals that were, like the tree kangaroo, not “immunized to encounter,” nor incapable of having anything “occupy a central place in their attention” (28). Instead, it seemed that both animals and humans were equally focused on relating to one another when such relations were possible. Watching the same keeper interact with different animals, I noticed different choreographies unfolding. Watching the same animal interact with different keepers I also noticed different choreographies unfolding. Perhaps the zoo was simultaneously “not a place for strangers to encounter the look of an animal” yet much more than a place for the public to just “look at animals” (28).

Thinking about the zoo in this way altered my research perspective in two fundamental ways. First, it firmly situated the zoo as a space of live bodies, real interaction, and unfolding choreographies, not *just* as a place that staged bodies, simulated interaction, or prescribed choreographies. Second, it asked me to think, not just about the way that humans affected animals, but the way that animals affected humans. Both of these ideas ran partially against the grain of the body of zoo studies literature, especially its foundations, which positioned nature and culture as separate.

A few weeks later, I went to the zoo again with a friend. When we entered the “African Rainforest” pavilion there was some unexpected remodelling going on at the indoor gorilla exhibit. Previously, the indoor gorilla exhibit had been divided into two areas, which were both visible to spectators. There was a large naturalistic enclosure with real and artificial vegetation and an older enclosure with multiple concrete levels, multiple metal structures and ropes. They were separated from one another by the visitor walkway and spectators could look into both areas. The gorillas could also see from one exhibit into the other. The staff at the zoo were busy erecting barriers over the viewing windows of the older indoor habitat and I asked a representative of the zoo about these changes. I was told that the zoo was changing the design of the exhibit so that the gorillas could no longer see each other through the windows because the younger males, who had been sequestered into a “bachelor troop,” had been taunting Charles, the troop’s aging, yet still reigning, patriarch. In the future, the bachelor troop and the larger troop—comprised of Charles, multiple female gorillas, and adolescents—would be kept separate, and alternately rotated through the exhibits, so they would not have any contact that would result in mental or physical disturbances.<sup>35</sup> I was reminded about the way animals in the city had changed

my own understanding and habits. Perhaps, if the animals at the zoo were changing zoological practices and designs, they could also change my practices and designs.

This possibility recontextualized my relationship to the zoo studies literature. I realized that I would be less invested with integrating my work into a larger body of scholarship and more focused on providing an alternate account of the zoo as a place of living bodies, which had the potential to affect other bodies. The effect that this had on my research trajectory can be clearly seen in the differences between Chapters 2 and 3, as animals move from explicitly passive beings staged within a choreography to more active beings who affect, in different ways, an artistic choreography. Obviously, close contact, in terms of the many ways that keepers interact with animals at the zoo, was never a possibility to explore at the zoo during my research, but the space did offer the opportunity to witness diverse living bodies in relatively close proximity to me. Rather than interpreting this as an explicitly “unnatural” situation,” I began to see it as an opportunity to understand more about the fluid divide between the natural and the cultural.

In “John Berger’s ‘Why Look at Animals?’: A Close Reading” (2005), Jonathan Burt critiques Randy Malamud’s celebration of “the imaginary over the ‘real’” and creation of “a hierarchy of acceptable and unacceptable forms of spectacle and imagery” in which the “most acceptable are, paradoxically, those at furthest remove from seeing the animal” (213). During this critique Burt contrasts two particular quotations from Malamud. In the first quotation, Malamud states that at the zoo a person would “not see what I consider to be a real giraffe, but rather a cultural stylisation, simplification, distillation, of a giraffe; a sample of giraffe; a (stinted) representation of a giraffe” (qtd. in Burt 2005 214). In the second quotation, Malamud states that “one *can* understand and respect something without seeing it. One can imagine a

giraffe; one can read about a giraffe” (qtd. in Burt 2005 214). Burt’s focus on Malamud’s valorization of the imaginary over the real made me reflect on the many physically absent animals that were referenced in different dance practices I had exposure to—swans, eagles, lions, snakes etc. Being at the Toronto Zoo regularly, I was constantly reminded how far away these “imaginary” danced animals were from the real ones that moved around me while I moved around them. Thus, the lion referenced in dance class by my Graham teacher was, in my mind, more of a “cultural stylisation, simplification, distillation” (214) than the lions in front of me in Toronto—or the lions I would later see in Berlin, San Diego, Los Angeles, or Mexico City. As such, I became focused on reframing the way that a human being could *see* while *looking* at a real zoo, real zoo practices, and the real animals that inhabited it—actively exploring Jane Desmond’s assertion that “looking” could imply “physicality and a merging” (Desmond 146). A sharp focus on bodies at the zoo, in many ways, caused zoological “truths” and zoo studies “truths” understood through textual absorption to recede or blur into the background. As the remainder of this dissertation will demonstrate, this perspective had implications for the way I *see* captive animals, my own artistic practice, and conventional “ways of seeing” deployed by zoo studies scholars, zoological professionals, ethological researches, dance scholars, and academic disciplines.

## CHAPTER 2

### A TAIL OF TWO COUNTRIES: CHOREOGRAPHING NATIONAL IDENTITY AT THE TORONTO ZOO

*Bound lion,  
Almost blind from meeting their gaze and popcorn.  
The Saturday kids love you.  
It is their parents who would paint your mane with polka dots  
To match their California shirts, and would trade nails for tie clips.  
A few roars delight them, but they wish you would quicken your pace and not disappear so often  
Into your artificial cave.  
For there they think you partake of secret joys and race through the jungle green layer of  
Memory under an African sun as gold as your mane.  
But you fool them,  
You merely suffer the heat and scatter the flies with your tail.  
You never saw Africa.  
The sign does not tell them that you were born here, in captivity,  
That you are as much a Canadian, as they are.*

Transcription of John Robert Colombo's poetry from the National Film Board's *Riverdale Lion* (1979).

Which animals are Canadian? In *Riverdale Lion* (National Film Board of Canada 1979), Canadian poet John Robert Colombo uses the figure of an "African" lion at the Riverdale zoo to playfully answer this question and to tease conceptions of Canadian nationality and identity. Simultaneously, Colombo questions the logic by which animal bodies are routinely associated with cultural and natural environments. One wonders, if this poem was written in today's political climate, would the author limit his definition of citizenship to birth on Canadian soil? Despite the reality that many of the animals at the Toronto Zoo, regardless of their ancestral "origins," were actually born in Canada, the Toronto Zoo choreographs bodies according to a vision of national identity which only extends Canadian "citizenship" to *some* of its inhabitants.



Since its establishment in 1974, the Toronto Zoo (previously known as the Metro Toronto Zoo), has distinguished itself from its Victorian predecessor, the aforementioned Riverdale Zoo from Colombo's poem, through the naturalistic staging of animals and global geographies on 287 hectares of land on the north-eastern edge of the city. Organized into distinct "zoogeographic" (Toronto Zoo 2019; Hancocks 1971) areas, where specific flora and fauna are gathered together as representatives of specific regions of the world, the Toronto Zoo continues to participate in a paradigm of zoological design in which animals are embedded within curated imaginary landscapes<sup>36</sup> evocative of certain very real places. Two of its current exhibition areas the "Canadian Domain" (1974-present) and the "Tundra Trek" (2009-present) stage visions of Canadian wilderness with the assistance of animals designated as "Canadian." However, these two visions of Canada seem very different. The former depicts a passive, homogeneous, remote, and forested yet essentially pastoral landscape largely devoid of conspicuous signs of technology and contemporary culture. The latter is an embodiment of a visually heterogeneous, interpenetrating yet bounded, specified geographic region heavily mediated by a profusion of technical and social artefacts from various cultural groups and industries.

Created over 30 years after the "Canadian Domain," the "Tundra Trek" envisions and animates a very different image of Canada than the "Canadian Domain." Nevertheless, both exhibitionary areas are heavily invested in imbuing a landscape and its animal inhabitants with powers of cultural signification and creating an experiential choreography in which human and nonhuman bodies move together in a dance of national belonging. How has this dance changed over time? Who is invited to participate in it? And, most importantly, how are humans, nonhumans, matter, and information choreographed into their different topographical stagings of "Canadian" nature?

## MEMORY



**Figure 1. Cement Globe at Toronto Zoo, Photograph by Author, 2016.**

Although I was born in Montreal, Quebec, I was raised in a small town in rural Illinois with a population of just over 2000 people until I was ten.<sup>37</sup> I lived with a different iteration of my family in an ivory three-storey, turn-of-the-century house with neoclassical pillars, stained glass windows, and a long, covered veranda, which stretched around the half of the house. The house was surrounded by twisted magnolias, short shrubbery, and huge white oaks. Black, brown, and red birds would visit our property to nest and consume the bread my mother occasionally left out, and I would glimpse grey squirrels and wild rabbits that had managed to avoid the local cats and dogs—and my territorial neighbour whose prime goal in life seemed to be protecting his vegetable garden. During summer, the thick sultry air would be filled with the resonant hum of cicadas and the moon and stars would compete for attention with the flickers of light from firefly abdomens. My sister and I once discovered a monstrous snapping turtle that

had buried itself in the moist soil under the veranda who promptly, literally minutes after its ‘discovery,’ was decapitated by the aforementioned neighbour (although he did generously return the skull and the shell after he had made turtle soup). The circus visited, and a decorated brigade of elephants marched down Main Street followed by bedraggled ponies painted to look like zebras and a procession of squeaking rusted red boxes on wheels containing lethargic lions and torpid tigers drooling behind thick iron bars. Predictably, Ray Bradbury's novel *Something Wicked This Way Comes* (1962)<sup>38</sup> is still one of my favorite books. Beyond the limits of the town, the landscape was filled with a rippling ocean of corn fields punctuated by islands of idyllically grazing black and white dairy cows.

We would often visit my relatives in Toronto and, if I was lucky, I would get to go to the Metro Toronto Zoo and experience a decidedly different vision of nature than that offered by my hometown deep in corn country. Organized into distinct areas, linked together by forested corridors, and filled with animals grouped by their geographical origin, the zoo was an otherworldly, or perhaps more accurately, a very *worldly* place to me. At the entrance to the zoo stood a large cement globe, which towered over me and highlighted, in bright colours, different environmental regions of the world where animals living at the zoo originated from (see figure 1). Without marked countries, the massive globe solidly imparted a new way for me to think about the world and its inhabitants, one which contrasted sharply with my American geography classes. I never thought it odd that, in spite of the erasure of these arbitrary but otherwise very real human boundaries prefaced on ideas of autonomous nations, there was one exhibit with nationalistic aspirations explicitly designated as the “Canadian Domain.” Once through the wooden gates, multiple routes were indicated on the footpaths by the large brightly coloured painted hoof and paw prints beckoning visitors to locate the bodies that might have made them.

The zoo was filled with massive, modern buildings made of concrete, walls of slanted wood, and huge panes of glass supported by metal beams, and their insides were filled with humid air, towering plants, flowing water, and birds that did not always flee from your footsteps. There were no animals behind thick iron bars and although some were sleeping, none appeared to have been painted.

One of my earliest memories of visiting the Toronto Zoo involves riding the zoo's monorail through the "Canadian Domain" with my grandmother. Travelling high above the ground with my face pressed firmly against the monorail car's large windows I could see spacious pastures filled with wood bison, elk, and muskox wandering freely, their huge bodies cast against the backdrop of the arboreal panorama, which, unbeknownst to me was known as the Rouge River Valley. After disembarking, grizzly bears and bald eagles could be found inside enclosures that seemed blended from parts of cottages, barns, and pioneer cabins and were surrounded generously on three sides by large evergreen and deciduous trees. The walk back to the rest of the zoo involved climbing a steep forested trail past cougars and the giant pastures we had zipped by on the monorail—and for which the reward for climbing was a trip to the McDonald's located near "Africa," which memorably, did not let anyone have straws. Later, while sitting on the couch at my grandparents' house and watching Canadian television, I would sometimes see short films about animals instead of the American commercials I was so used to in Illinois. These televised portraits, with eerie flute music and the calm voice of the disembodied male narrator, told me about different kinds of Canadian wildlife.<sup>39</sup> They always ended with a brief message that told me that if I was interested in more information about the animal showcased in the particular segment, I could contact the Canadian government, who was obviously responsible for these creatures. When I would return to Illinois, I would remember

these short films and the “Canadian Domain” with its animals surrounded by trees in large rough enclosures made of wood, its fast monorail, and the big hill, which connected “Canadian” nature to the zoo’s imaginary vision of a larger world. I would think that I had learned more about what Canada was like, a remote land of abundant nature with many large wild things in various shades of brown, living relatively freely in vast tracts of a spectacular tree-filled landscape. Far away from people, including the turtle-hacking neighbour, the animals thrived under the benevolent supervision of a caring government, on land inherited from people who had disappeared from the landscape a long time ago—or so it seemed suggested. I’m sure I was not the only child who believed this fiction.

When, a few years later, my family returned to live in Canada—specifically to Burlington, Ontario—my naïve and intrinsically white and nostalgic vision of Canadian nature became noticeably tarnished by extended exposure to a different reality. Black, brown, and red birds were replaced by black, brown, and grey birds, grey squirrels with black squirrels and I didn’t see any rabbits in the garden at all. The only animals in abundance seemed to be the flocks of Canada Geese my grandmother’s dog chased frantically by the lake and left droppings that stuck to the soles of my shoes. My new neighbours were not frightening figures, but quite ordinary people from India and South Africa who owned quite ordinary dogs and cats. The televised animal portraits with the eerie flute music had disappeared and were replaced by news accounts of species decimation, forest depletion, and indigenous land claims. In public school, we read books by Farley Mowat describing a Canadian wilderness populated by real groups of people that were not mentioned at the zoo.<sup>40</sup> Looking out the window while driving between cities with my mom, I did not see oceans of corn, but black and white dairy cows still populated

the landscape. However, when I visited the Zoo and went back to the Canadian Domain with my grandparents it was as if no time had passed.

What follows is a description of my walks through two exhibits at the Toronto Zoo: the “Canadian Domain” and the “Tundra Trek.” The first walk will relate my experience of the “Canadian Domain” exhibit to illustrate its staging, as explored by foot, and highlight the signposting that guided the visit. Afterwards, a second walk along the “Tundra Trek” will describe my experience of this exhibit and consider the display strategies that are part of this institutional choreography. After each “walk,” I will discuss the larger implications of both exhibits, their exhibitionary logics, and their choreographic prescriptions for visitors, including their ‘role’ in the spectacle, which conjures a particular experience and understanding of Canada as an imagined place. As Tim Ingold and Jo Lee Vergunst (2008) suggest, walking is “a way of thinking and of feeling” that contributes to the ways in which (cultural) knowledge and forms are generated (2) including the knowledge imparted and co-created by moving through exhibitions and zoological displays on foot.<sup>41</sup> Following their ideas, I assert that the Toronto Zoo’s focus on walking as a means to experience its exhibits is a significant part of the visitor experience as it positions the walker within a process of shifting embodiment and gradual knowledge creation.

## THE “CANADIAN DOMAIN”



**Figure 2: Entrance to the "Canadian Domain", Photograph by Author, 2016.**

Visiting the “Canadian Domain” exhibit over twenty years later, the monorail is gone, but walking this exhibit reveals that wood bison, wapiti, moose, cougars, bald eagles, lynx, and a lone raccoon still reside here.<sup>42</sup> A collection of signs from various eras mark the entry point to the exhibition at the top of the hill, near the zoo mobile drop-off zone and far away from the colourful and diverse collection of simulated modular landscapes that much of the zoo has become. The first and largest of these signs, decorated with carved silhouettes of bison, is reminiscent of a summer camp’s and signifies arrival at the “Canadian Domain” in big white painted letters (see figure 2 above). Subsequent signs are older, faded boards listing the names of upcoming species, printed in big black letters, with an outdated map (a testament to the species that are no longer present).

These subsequent signs act as visual markers,<sup>43</sup> reminding visitors they are following the “Grizzly Bear Trail,” which is further indicated by worn red and white bear paw prints painted on the asphalt and accompanied by a list of tips for amateur photographers to ensure their capture of “magic moments” through the lens of their camera. Alongside these signs (or markers), are cautions to visitors about the incline, the lack of a secondary exit, and time commitment for the trek (suggesting about an hour or so). These additional considerations all act as implicit warnings about the physical labour that a visit to the “Canadian Domain” exacts and a perhaps a suggestion it might be a place for the very young, the weak, or the elderly to avoid.<sup>44</sup>





**Figure 3: "Grizzly Bear Trail." Photograph by Author, 2016.**

Descending into the valley, no animals or displays are immediately visible. There is only a wide and cracked asphalt walkway framed on either side by lush vegetation, which channels the warm wind (see figure 3). Venturing further, two exhibits emerge out of the curtains of foliage. On the left, a lone lumber and wire enclosure extends up to the tree tops. Inside it are a sleeping lynx, a lumber hutch-like structure, several mid-sized trees, and a number of tall posts with raised platforms inserted into them. On the right, is a large concrete brutalist basin (see figure 4), an overgrown moat surrounding a grass covered platform where a resting raccoon lies practically squished into a plexiglass tube placed in front of wooden structure lashed together from sticks and rope.



**Figure 4: Raccoon enclosure at the Toronto Zoo. Photograph by Author, 2016.**

Both enclosures have recent, digitally printed signs, with the animal in question looking animated and alert and cast in front of a decidedly more majestic illustration of an idealized wilderness habitat. Along with the transparent outline of a graphic maple leaf are also small maps, which clearly depict the animals as living not only in, but beyond, the borders of Canada, and printed information about the species' lives in the wild, current threats they face, and consumer-orientated ways to get involved with conservation attempts such as purchasing recycled paper products (see figure 5 below).



**Figure 5: Raccoon information sign at the Toronto Zoo. Photograph by Author, 2016.**

Further down the trail, trees engulf the visitor's vision again until a large, square, green pasture emerges from the Rouge Valley's spectacular boreal landscape (see figure 6 below). Its geometry is maintained by thin black metal fences, which lie behind the overgrown and

crumbling remains of the concrete monorail track, which itself sits behind another thin black metal fence. Two large wood bison graze in the distance while an unidentified bird of prey circles over the forest behind them. On the left is the cougar exhibit. Similar to the Canadian lynx enclosure, it contains a series of tall bare poles with irregular platforms, young trees, and sporadic ground cover. Two large beige cats lounge yawning deeply, impressed into the hollow of a large stone. A lone antler sits on the ground, in the centre of the exhibit. A structure resembling a small, unpainted log cabin with a small door sits behind the enclosure amongst the large trees, which frame the entire display. Again, a digitally printed sign is present, this time with the title “Ghost Cat.” Walking further down the path, alongside the remains of the monorail, a fork in the road emerges. To the left, another pasture can be seen in the distance and to the right, the path sneaks under the crumbling concrete monorail track. A set of less faded signs stands on the grass at this juncture and indicates where the remaining “Canadian” animals are located.



**Figure 6: Bison enclosure at the Toronto Zoo. Photograph by Author, 2016.**



**Figure 7: Sign indicating bald eagle enclosure. Photograph by Author, 2016.**

Continuing to the left, the next exhibit features the bald eagle, and two large birds perch on horizontal logs extending out from bare vertical poles similar to those in the cougar and lynx enclosures. Their bodies are still, but their eyes quite alert. Along with a prominent new sign, there is a smaller sign, which refers to the bald eagles according to their Anishinaabe name and briefly mentions their role in First Nations' belief systems (see figure 7). Further down the path is the pasture that was glimpsed in the distance. Beyond the thin black metal fencing there is a lone tree and numerous moving black and brown figures, which one assumes are the wapiti and wood bison indicated on the signage. Courteously, a large magnifying viewfinder apparatus is available for use for the fee of one dollar (see figure 8 below). A heavily overgrown enclosure that once held wolves (now exhibited in the "Tundra Trek" area of the zoo), is to the right and

apparently being decolonized by squirrels. Down the other fork in the path sit the enclosures for moose and grizzly bears, and a large pond with a waterfowl viewing station.



**Figure 8: Viewfinder at the Toronto Zoo. Photograph by Author, 2016.**



**Figure 9: Grizzly bear Enclosure at the Toronto Zoo. Photograph by Author.**



**Figure 10: Bear swimming at the Toronto Zoo. Photograph by Author, 2016.**

The grizzly bear exhibit (see figures 9 and 10 above) is framed by a partially roofed structure made of large planks of stained wood, recalling a highway rest stop or picnic station at a national park. There are large viewing windows inserted into it. Looking through them, grass grows around a number of rocks, logs, and a giant dead tree branch with a partially chewed and battered metal barrel hanging from it. Close to the windows is a deep concrete pool of dark green and brown water framed by stones where a bear sits half submerged. Closer still is a plastic replica of a salmon that perhaps once looked realistic and a wapiti skull complete with its massive symmetrical antlers. Two giant plastic tubes covered in rocks and overgrown by plants form a cairn-like structure towards the back of the exhibit. A carved stone statue of an adult bear with two bear cubs stands in front of the exhibit—all three seem decidedly more receptive to viewing and prepared for photographic opportunities than the real bear resting in the brackish pool.<sup>45</sup> Again, the exhibit is framed by trees, but these ones obscure another wire fence and a metal kennel.

Further down the trail, past the abandoned wooden monorail station, the oblong shaped moose enclosure (see figure 11 below) allows the shy giants to huddle far from zoo viewers. The sit hidden in plain sight against the trees bordering the field and are camouflaged despite the lack of any large trees or conspicuous vegetation besides the grass within it. The moose seemingly prefer to use the trough-like feeding station located close to the pathway when unobserved.



**Figure 11: Moose enclosure at the Toronto Zoo. Photograph by Author, 2016.**

Near the moose enclosure is the waterfowl viewing station. The banks of the waterfowl pond are surrounded by fencing. Beyond the fence the earth teems with thick vegetation and a pair of trumpeter swans and a number of species of waterfowl float on the surface of the water amidst the water plants and rings of bright green algae. An old rowboat partially filled with water lies in the long grass beside the green wooden viewing platform. Scaling the steps up to a cottage-like structure results in a spectacular view of the pond (see figure 12 below). One small island, with one mid-sized tree, sits in the green blue water. Again, the Rouge River Park looms in the background. Hidden from view until one enters the viewing station are faded plastic and wooden signage, which relate information about the species of birds, reptiles and amphibians that might live or visit there.





**Figure 12: Waterfowl pond at the Toronto Zoo. Photograph by Author, 2016.**



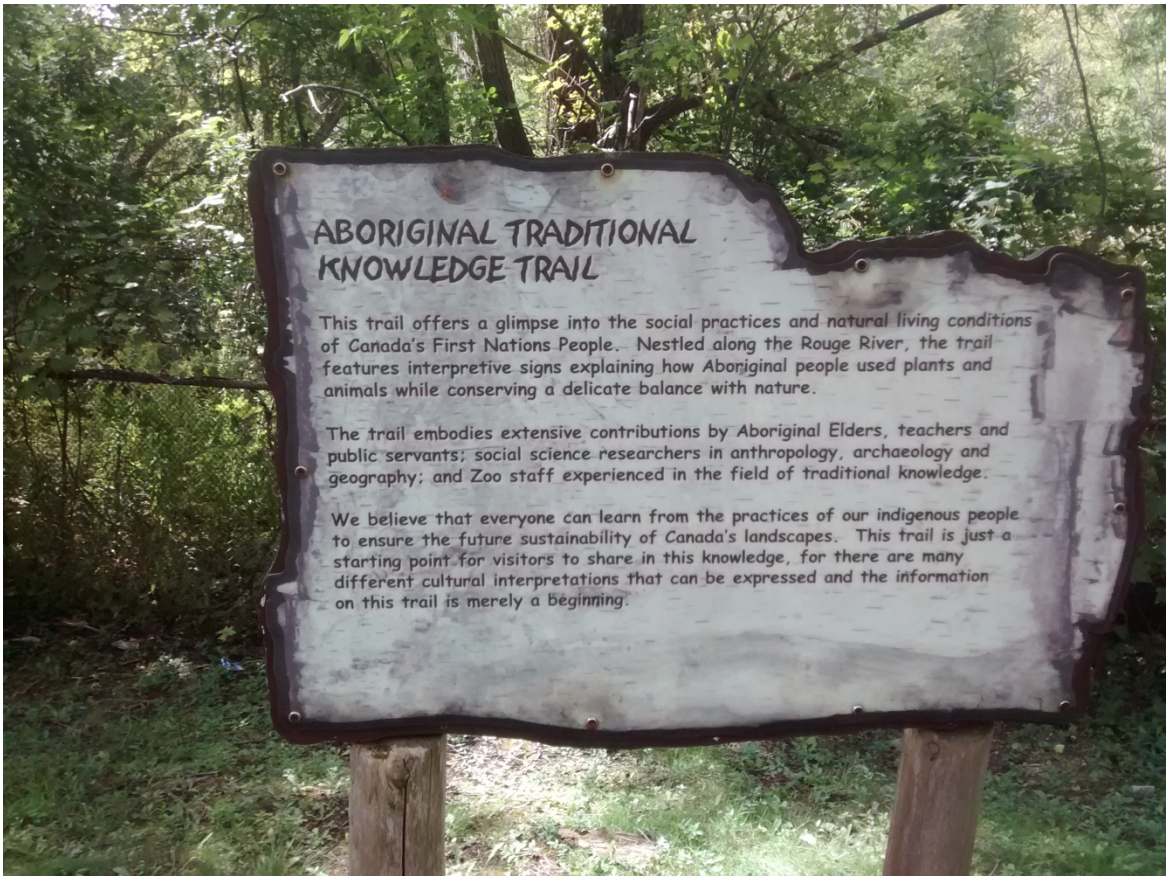
**Figure 13: Vending machines at The Toronto Zoo. Photograph by Author, 2016.**

The brightest things in this region are two literally glowing vending machines advertising Coca Cola products (see figure 13 above) located near another cottage-like building that contains washrooms that is adjacent to the viewing station. Less scintillating is the sign for an exhibit, not part of the area's original design: four slender wooden poles stand semi-upright leaning into one another, mimicking the framework of a tipi (see figure 14 below). Hanging from its apex is a rough circle, which alludes to a leather drum or dreamcatcher with two eagle feathers drawn on it alongside the printed words "Aboriginal Traditional Knowledge Trail." Next to the tipi structure is a sign designed to resemble worn birch bark with the title "First Nations Teachings" (see figure 15 below). It describes various methods for knowledge preservation and transmission employed by First Nations people including storytelling, birch bark scrolls, petroglyphs and

wampum beads. It fails to mention how rarely these methods of information were historically recognized in any meaningful fashion by Canadians, Canadian governments, or Canadian law.<sup>46</sup>



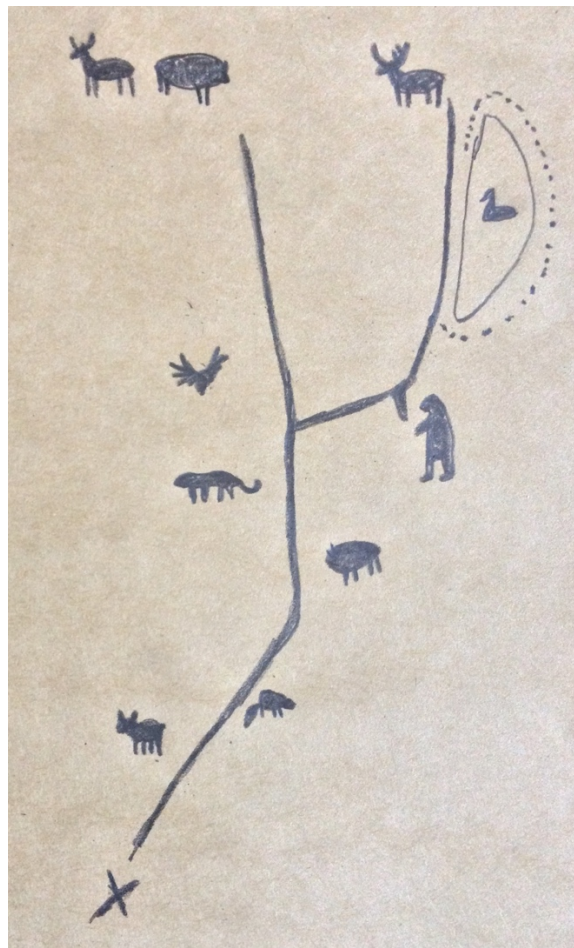
**Figure 14: "Traditional Knowledge Trail" at the Toronto Zoo. Photograph by Author, 2016.**



**Figure 15: Sign for "Traditional Knowledge Trail." Photograph by Author, 2016.**

The wooded trail leads around the periphery of the large pond and the thin partially paved route is marked by intervals of garish *and* muted signs referencing introduced species of plants, the clans of the Anishinaabe nation, the structure of the clan system, and Anishinaabe names for various local plants and animals. The signs are located sporadically, and set at a child's height, near dense bushes or at the base of trees. They hardly compete with the glittering, sun-reflecting pond on the right or the rushing Rouge River on the left. A black chain link fence prevents access into the national park but does not prevent the view of the rushing water flowing away into the "wild" panorama of the woods. The "knowledge" trail terminates and merges with the already familiar path, which leads back up to the "world" of the zoo.

It is much easier to walk down the “Grizzly Bear Trail” than up it, and the woman ahead, pushing a children's stroller, is clearly focused on the demands of the ascent with her head down and arms locked. The “show” is over and less notice is paid to the spectacular view; the cougars, the remains of the monorail, the bison, and the lynx. Momentarily jealous of the raccoon, who now lies splayed out on top of his weathered hutch, his fur ruffled by the breeze, one remembers that with a bit more persistence there's still a whole “world” to see up there—a smoother, brighter “world” with more distractions, more information, and more conspicuous signs of culture; a “world” that invites visitors to walk through the semblance of landscapes but rarely allows them to gaze at the lands that lay beyond them.



**Figure 16: "Canadian Domain" Map. Drawing by Author, 2019.**

## THE “CANADIAN DOMAIN” AS CHOREOGRAPHED SPECTACLE

Although intentionally revised through the incorporation of new signage and the “knowledge trail,” the “Canadian Domain” still maintains imaginary and tacit links to pervasive mythologies of centralizing Canadian identity promoted by Canadian authors, intellectuals, government agencies, and media during the period of its creation.<sup>47</sup> While technically a practical impossibility for the animals caged in the zoo, the denuded tune of “True North Strong and Free” underpins the “music” that the presented information, materials, and bodies dance to in this deceptively understated choreographic spectacle.<sup>48</sup>

Rob Shields, author of *Places on the Margin: Alternative Geographies of Modernity* (1991) observes three ideas about the North that were prominent among southern Canadians during the period of the zoo’s conception:

1. the idolisation of the North as a wilderness zone of purity, an unstained [...] cultural 'heartland';
2. the North as a resource frontier offering riches to developers;
3. ignorance founded on its irrelevance to everyday life. (181)

Shields states that “the rhetorical stress on the first, the periodic bouts of the second, and the individual practice of the third produces a difficult picture” and that these “stances have coexisted for many years in complex and shifting formations of inconsistent practices and prejudices, institutional policies and individual behaviour’ (181). In spite of the “difficult picture” these ideas create when articulated together, the “Canadian Domain” miraculously manages to incorporate aspects of all three into its schematics.

An atmosphere of “wilderness” and “purity” is indicated through the exhibits placement away from the plethora of advertising, technology, modern buildings, and

contemporary displays that dominate the rest of the zoo's topography, as well as through its co-opting of the majestic Rouge River landscape as a backdrop for its exhibits.<sup>49</sup> The exhibits are distributed sparsely, embedded in groves of vegetation similar to that which appears in the distance. Individual enclosures utilize a combination of rustic architecture evocative of material connections to wilderness through the use of rough wood, painted surfaces in various shades of brown and green, and designs alluding to seasonally used structures such as cottages, cabins, and national parks. In many cases, the same plants that surround the enclosures also are planted inside them. The visitor's body participates in this paradigm through immersion in a visually non-urbanized space and through tacit agreement to both the descent and hike out of the valley and its non-negotiable time commitment. It is arguable that the abandoned monorail track and station only reinforce this choreography by reminding the visitor that mundane bodily labour is the only option for traversing this fabricated landscape and alluding an undoing of human presence and culture.<sup>50</sup>

The bodies of the animals, in collusion with secondary aspects of the exhibit design, reinforce the second idea identified by Shields—nature as a “resource” (1991).<sup>51</sup> Most of the exhibits can be divided into two types: the pasture and the enlarged livestock cage—both are symbols of a pacified nature under human management. The bison, moose, and elk are all staged within fields; large empty clearings cut out of the surrounding forest. At a distance they could all be mistaken for cattle—although definitely not black and white ones. The eagles, lynx, and cougars, on the other hand, all carnivorous species deemed capable of various degrees of violence to humans or their animal “property,” are located within enclosures of wood surrounded by wire mesh that resemble large cages like those used for rabbits, domestic fowl, or foxes bred for the fur trade. Inside their less than spacious

accommodations, there is little for them to do besides rest or occasionally move between platforms. Their bodies, although appearing healthy and well-maintained, are docile and inert.

The waterfowl viewing station occupies a more liminal space and acts, through its incorporation of migratory species, as a conduit between the environments outside the zoo and the ‘habitats’ within it. Likewise, the grizzly bears and lone raccoon are also liminal figures whose enclosures fall outside the general schematic of a domesticated and passive wilderness. However, the design of the grizzly’s enclosure is reminiscent of a national park picnic area and the raccoon’s hutch inside the concrete basin appears designed in a haphazard manner, like a temporary shelter cobbled together from twigs and sticks. Both exhibits situate their respective inhabitants on the “margins” of wilderness.

Finally, Shields’s third idea—ignorance—is reinforced by the repetitive and homogenous design, which fails to represent the distinct ecological niches and very real places inhabited by the purportedly different species. Although the use of particular images on particular signage might visually allude to the reality that a moose might thrive in a distinctly different place than a bison, and the different bodies of a lynx and a cougar might indicate their species’ adaption to diverse environments and circumstances, the continual presence of the same architecture and same plants around that architecture renders the “Canadian Domain” an embodiment of a homogenous Canada where an entire continent of difference is absent and erased. Considering that on that cement globe (see figure 2), still positioned at the entrance to the zoo, there are at least four “bioclimatic” zones depicted within the space where Canadian borders would usually extend to, this staging is confusing. However, considering that according to Shields, “True North Strong and Free” has a



“striking prominence amongst English-speaking, central, southern Canadians and in the dominant political rhetoric this majority generates” (164), it is less than surprising. It is a strategy still routinely utilized by advertisers to sell Canadian sports teams, coffee, beer, deodorant, wilderness excursions, and property despite its contestation by many groups who are excluded from its myopic perspective.<sup>52</sup>

Inscribed into the design of the entire exhibit and the opportunities and limitations it creates for the bodies of both its permanent animal inhabitants and its temporary visitors are ideas, which formed and continue to inform contested monolithic conceptions of a homogeneous Canada. Situated outside rapidly expanding and multicultural Toronto, the “Canadian Domain” stages a nostalgic and domesticated vision of “the wilderness beyond the interrupted agrarian frontier and the urban islands of mid-Canada” (Hodgins and Hobbs 1985 1-2). Perhaps once an affirmative representation of the passive bounty of a young nation, it now sits passively representing a Canada that only existed in the imagination.

## THE “TUNDRA TREK”



**Figure 17: Sign for the "Tundra Trek" at the Toronto Zoo. Photograph by Author, 2016.**

The “Tundra Trek” sign is a large and colourfully painted wooden disc erected on top of a fake stone painted grey, beige, and green (see figure 17 above). Reliefs carved into its surface depict a map of half of North America extending up to the North Pole with superimposed figures of a caribou, an arctic wolf, an arctic fox, a snow goose, a Canada goose, and a snowy owl. At the bottom-centre is the figure of a polar bear. Although there are no political boundary lines present on the map, the land is clearly divided by colour into two areas, one area is depicted in unpainted but stained wood and the other in light blue. The pale blue colour indicates where the “tundra” is located. Written in large white letters, which frame the upper half of the disc, are the words “Tundra Trek.”

Along the path, which leads away from the various types of fast food available at the Caribou Café, are a variety of cultural objects—a white bush plane, a mock airline kiosk, a zip-

line partially hidden by vegetation, a prospector's tent, a bowhead whale skeleton, artificial whale fossils, a motorboat, and a canoe (see figures 18 and 19 below)—all of which are accompanied by signage, printed in large rounded and ‘childish’ font. One sign, fashioned to resemble a large postcard, details the long air trip from Toronto to Resolute Bay, and the plane’s haphazard but safe landing. It is postmarked to an uncle living in Hong Kong. On the left is a large mound of landscaped earth surrounded by two sets of fences. On the right, is a row of small stores fashioned to look like the buildings at a prospector camp and the location where the zoo-mobile stops. Directly ahead is the slightly meandering, but gently sloped path leading to the polar bear exhibit.



**Figure 18: Prospector's tent at the Toronto Zoo. Photograph by Author, 2016.**



Figure 19: Caribou Café at the Toronto Zoo. Photograph by Author, 2016.



Figure 20: "Polar Bear Cub" sign at the Toronto Zoo. Photograph by Author, 2016.

The polar bear exhibit is actually comprised of three separate enclosures. The first of these has a large sign situated overhead that states “Polar Bear Cub” and flanking its path are blue signs with pink and white printing and large “baby” photos detailing the life a polar bear cub at week one, week four, week six, week eight, week twelve, and week fourteen as well as one sign about general polar bear information (see Figure 20 above). The viewing area for the polar bears is accessible through a building marked by a large sign that states “Aurora Borealis Weather Station.” Once inside, there is information printed regarding the meteorological devices on display, weather stations, climate change, and the cub’s (officially known as “Juno”) appointment to the rank of private by the Canadian military. Viewed through the large display windows, this bear is clearly a pragmatist who prefers to live in the present rather than bask in the glory of early achievements, as he is busy and concentrating on destroying a plastic bucket. His enclosure is surrounded by artificial, large, blue-grey rocks, which camouflage a door leading to maintenance and holding areas, and a black fence with a row of coniferous trees behind it. Inside, there is a small pool with a grassy knoll behind it, a variety of real, large, and small rocks, logs, wood fibre, cement and the grey bucket that is being rendered into pieces of plastic. A row of black poles of unknown purpose bisects the upstage space (see figure 21 below).



**Figure 21: Polar bear enclosure at the Toronto Zoo. Photograph by Author, 2016.**

Walking out of the weather station there are more grey-blue rocks that seem to grow out of the human architecture and several signs about bear adoption, *Pokémon Go* stops, and the opportunity for more photographic “magic moments.” Recessed into the faux stone is the first of a number of small viewing windows interspersed along the perimeter of the enclosure and through which the next segment of the polar bear exhibit can be glimpsed. There are large, white concrete “stones” stacked behind a pool of clear blue water, and an adult polar bear can be seen floating on its back, its hind legs peddling lazily. Maneuvering around the outcrop of “rock,” a waist-high concrete ledge with tall panes of glass bolted into it extends for the length of the amphitheater observation space and allows an “aerial” view of the floating bear—as if it is being seen from a semi-stationary and low flying helicopter.



**Figure 22: Polar bears at the Toronto Zoo. Photography by Author, 2016.**

A small expanse of water fills the downstage portion of the space and upstage of it are concrete slabs fashioned to look like rocks covered in pebbles, a small series of bushes, and another door set into the fake boulders (see figure 22 above). On the right-hand side are the previously seen maintenance and housing building disguised as a rocky outcrop, on the left-hand side is a similar configuration of artificial rocks topped with solar panels, and in the centre is the backdrop of a grassy slope lightly punctuated by evergreens—a visual prelude to the third “act” of the exhibit. The two sections are separated from one another by a concealed concrete moat. A third large, yellowy-white bear stands alone, starkly set against the grass slope and eyeing the other floating behemoth from the other side of the almost invisible, unspannable divide.

A sign for underwater viewing encourages visitors to descend down under the main viewing station encased in the landscape (see figure 23 below). The walls and pillars of the blue and grey painted cement tunnels, that lead in and out of the underwater viewing, are plastered in signage about permafrost and pollution, the grasshopper effect, sea ice changes, sea ice

conditions in the arctic, sea ice and human activities, circumpolar sea ice, sea ice changes in Hudson Bay throughout the year, the cryosphere, the Inuit story of Nassiqsuqturarjuk, the conservation partnership between the Canadian government and the Toronto Zoo, corporate sponsorship by Sanyo, and discrete facts about beluga whale, ringed seal, inconnu, northern pike, arctic grayling, brook trout, arctic char, arctic lamprey, stickleback, bearded seal, and walrus. Once at the large viewing windows, which are framed by fake ice and issue forth blue light, the massive back of the floating bear can be seen, its thick fur swaying in an artificial current issuing from jets hidden in the cement walls. Pivoting to exit, there is a large bright digital screen with polar bear footage and a coin press for transforming nickels into Toronto Zoo polar bear souvenirs.



**Figure 23: Underwater viewing area at the Toronto Zoo. Photograph by Author, 2016.**

Emerging from the pale and dimly lit cement tunnel and into the bright simulated tundra, the arctic wolf enclosure dominates the vista. The sloped enclosure appears to extend into the



distance where another Coca Cola machine beckons. Its “windswept” terrain is marked by irregular groupings of coniferous and deciduous trees of various sizes, bushes and other small plants, a round pool of water, large and medium sized boulders, a weathered wooden platform and equally weathered logs. Although the wolves are not visible, and they are perhaps together “just over the horizon,” a large blue sign with the now familiar but still juvenile looking font, briefly describes wolves’ hunting organization and heralds the spectral presence of the absent party. Close by, another sign cheerfully announces that excrement from zoo animals, here euphemistically referred to as “zoo poo” can be used to generate electricity. Whether or not it is suggesting that we need more animals in zoos to take full advantage of this opportunity is not disclosed.

Following the asphalt pathway, consciously composed of different “melodies” of arctic vegetation (or arctic vegetation substitutes) and fitted with the sumptuous seating provided by Muskoka chairs and rough-looking yet smooth stained timber benches inscribed to loved ones now passed, the third segment of the polar bear exhibit emerges. The rounded hill that was formerly just the backdrop for the floating bear now dominates this vista and continues to veer upwards. Another simulated rock installation is inserted into its slope, a cave of sorts, but of questionable practical value as its depth appears little more than a metre and it seems much less spacious than the one fitted with viewing windows for humans on the outside of the enclosure (see figures 24 and 25 below).



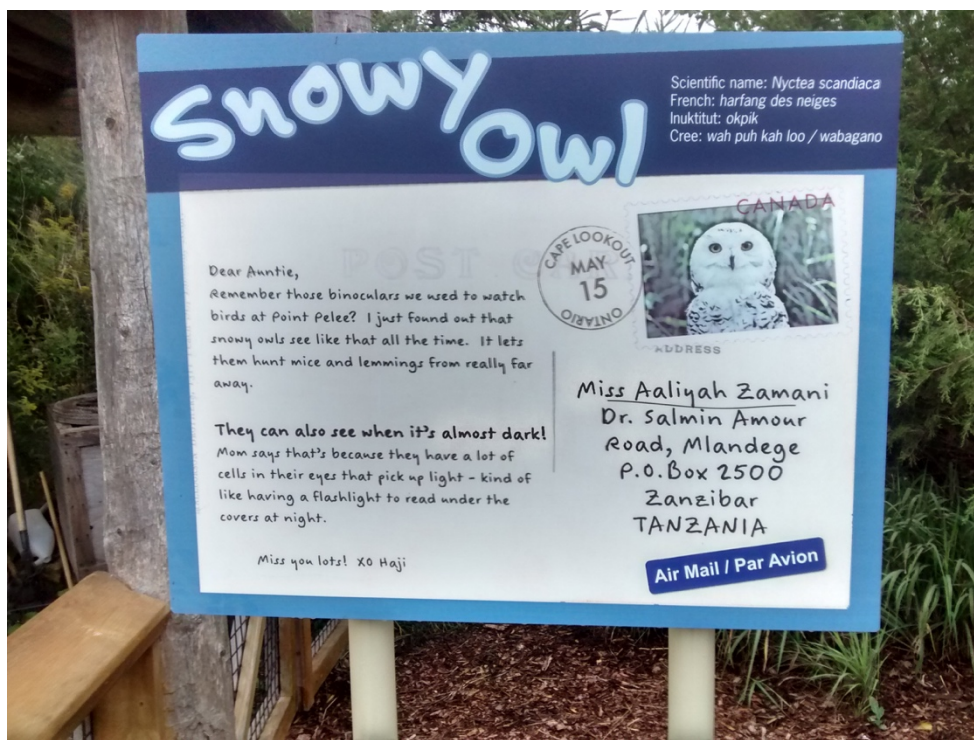
**Figure 24: Polar bear cave at the Toronto Zoo. Photograph by Author.**



**Figure 25: Spectator viewing area at the Toronto Zoo. Photograph by Author, 2016.**

Seemingly less fecund than the arctic wolf enclosure, the green grass here is still punctuated by real and artificial rocks and a few large evergreens. A cement moat located behind

the golden wood fence separates the pathway from the enclosure. On the right-hand side, close to the beckoning Coca Cola vending machines, is the snowy owl aviary. The aviary is a more minute and concentrated space than either the polar bear or arctic wolf habitats. A net of thin meshed metal wire surrounds a diminutive but dense landscape of small trees and bushes. Partially hidden under the branches of a large bush, the snowy owl surveys its domain. A sign on the fence informs visitors that it only has use of one eye and its condition is monitored by staff. At the right-hand side of the aviary are a series of weathered wooden shipping boxes, a plastic replica of a snowy owl, and another large postcard relating the sighting of a snowy owl to a relative in Tanzania (see figure 26).



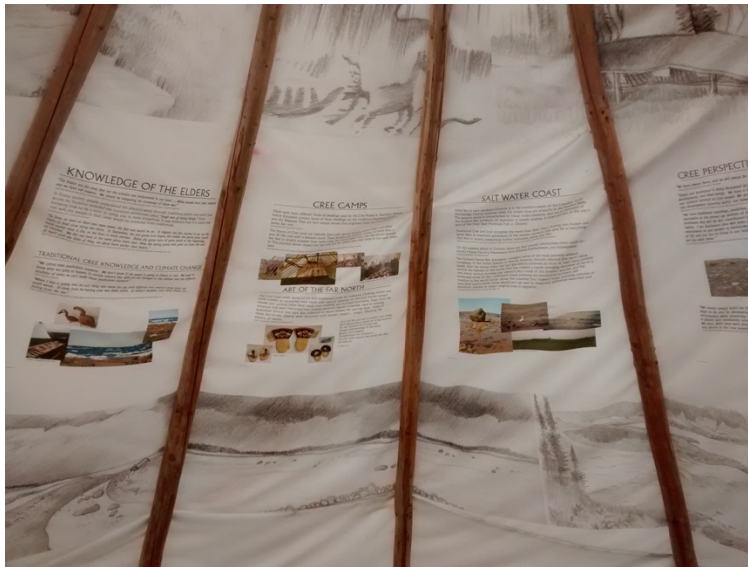
**Figure 26: Postcard Sign for Snowy Owl. Photograph by Author, 2016.**

Continuing down the path the third section of the polar bear enclosure is still visible on the right and one final theatrical feature is visible, a small river with a tiny waterfall that leaks

into a small pool. The mound of rocks, which camouflage the holding area and flank the central polar bear viewing area, are barely visible anymore. There are large signs about the northern phenomena of “drunken trees” and about scientists who study polar bears, both of which sprout out of the ground around the path. On the left-hand side, two large plastic tipis rise from the ground vegetation on a slightly elevated stage of brown earth (see figure 27 below). Outside the tipis are large signs about “Tipis on the Tundra,” seasonal hunting camps, and how tipis conserve trees. Printed on the interior of the tipi are brief essays entitled “Cree Perspectives of the Future,” the “Salt Water Coast,” “Cree Camps,” “Art of the Far North,” “Knowledge of the Elders,” “Traditional Cree Knowledge and Climate Change,” and “On the Land—The Tundra” (see figure 28 below). Hanging from the centre of the second tipi is a pair of caribou antlers and on the ground is a fake stone hearth with blue-grey wooden boxes arranged around it.



**Figure 27: Tipis at the Toronto Zoo. Photograph by Author, 2016.**



**Figure 28: Interior of tipis at the Toronto Zoo. Photograph by Author, 2016.**

Outside of the tipis is another giant postcard, composed to a fictional grandfather in India, which surreptitiously introduces the next animal attraction, the European reindeer exhibit. A lone reindeer sits in an expanse of grass and dirt otherwise barren except for a small shelter/feeding area and a tree. To the right of this exhibit is an inukshuk and a number of artificial beige stone outcroppings with real coniferous trees growing out of them and covered in small signs about Inuit culture. The signs are titled “The Thelon River,” “The Origin of the Land,” “Inuit Spirituality,” “Material Culture,” “The History of the Land”. A larger bright orange sign about Inuit tupik tents is wedged into the space where the edges of the reindeer and polar bear exhibits meet. Immediately to the left of the reindeer exhibit is a shallow pool foregrounded against a diminutive concrete cliff face topped with profuse vegetation. Although empty at the moment, this exhibit is, according to signage, about the “Ontario Breeding Bird Atlas,” Cree goose hunting camps, and the safe breeding grounds the tundra provides, and is meant for waterfowl and migratory birds. The pool’s water is dark and bright green algae on the surface provides

visual competition with yet another vibrant Coca Cola vending machine set alongside a more modest matte blue recycling container and a wooden garbage can (see figure 29 below).



**Figure 29: “Tundra Trek” vending machines at the Toronto Zoo. Photograph by Author, 2016.**

The pathway curves sharply, and on the left is a children's garden set amongst tall straight grasses with signs that tell the Cree legend of the “Queen Mosquito” in discrete increments. On the right are empty picnic tables sitting in the shade of large trees and small signs relating information about traditional Cree medicine. Large artificial rock outcroppings sit on the left, followed by a series of tubes partially buried by earth and inviting children to experience life in an arctic fox den. The path transforms into a short covered wooden bridge with hidden speakers that pipe out the recorded buzzing of tundra insects (see figure 30 below).



**Figure 30: Covered Bridge at the Toronto Zoo. Photograph by Author, 2016.**

The left side of the bridge is partially open and from behind the safety of its wooden railing, the other half of the arctic wolf exhibit is visible. The wolves sit near to one another under the shade of a large tree, their white coats flecked with dirt. The side of the bridge that is not open obscures view of the holding pens for the arctic wolves, a series of fenced metal paddocks reminiscent of a professional dog kennel. Behind the paddock is the supply entrance and washrooms for the Caribou Café restaurant. The paved path resumes, and on the right large panes of glass and a black wire fence outline a square of grass. Within its boundaries two plump white snow geese sit amongst rocks, long grass, and logs. The trail leads past the remainder of the arctic wolf enclosure towards a concrete island that contains a large metal “bear removal device” and a contextual sign (see figure 31 below).



**Figure 31: "Bear Removal Device" at the Toronto Zoo. Photograph by Author, 2016.**

Directly ahead is the a previously seen “TundraAir” zipline attraction where flights on the “TundraAir” zipline can be purchased. The ride, which encases “passengers” in a miniature plane apparatus, allows for an aerial view of the entire “Tundra Trek” landscape and runs directly over the arctic wolf habitat.<sup>53</sup> Disembarking from the ride, signs for the vendors selling pizza, doughnuts, coffee, popsicles, and hamburgers nearby all call out to those who didn't experience any nausea during their brief “flights.”





**Figure 32: "Tundra Trek" Map. Drawing by Author, 2019.**

### **EXHIBITIONARY LOGICS: EMBODIED UNDERSTANDINGS**

The "Tundra Trek" is situated adjacent to the "Eurasian Wilds," "Americas," and "Australasian" areas of the zoo, but none of these areas are visible due to corridors of trees that

obscure most sights from beyond. Almost magically, visitors find themselves momentarily suspended in a hybrid airport/history and science museum/food court fringed by arctic animals and plants. Due to the overlapping nature of the exhibits and the legion of signage that draws attention to both minute and large aspects of the design, it is difficult to visually discriminate between the boundaries that separate one thing from the next despite the very real and numerous physical boundaries that are present to funnel visitors through each area. Each animal enclosure is distinct but contains refrains from the exhibits that precede it and there are multiple objects embedded within, alongside, or between each exhibit, and multiple vantage points from which to view animals within their “habitats.”

This staging strategy, as Paul Harpley relates in “Engineering Metaphorical Landscapes and the Development of Zoos: the Toronto Case Study” (2011), was the result of a design process that involved “travel, consultation, and cooperative design and interpretation input from Cree and Inuit representatives in Ontario, Manitoba, and Nunavut”, representatives referred to as “collaborators and partners” (1212). Vital parts of the projects envisioning were “the relationship between the environment and indigenous traditional knowledge,” and

the relationship between sacred landscapes, sense of place, reverence for nature and local knowledge so prominent in aboriginal North American cultures, especially with respect to historical and contemporary relationships between the polar bear and its habitat and the indigenous Cree people in the Hudson Bay lowlands of Ontario. (1213)

Despite this specific attention to the indigenous Cree people in the Hudson Bay lowlands of Ontario, the “Tundra Trek” area is more accurately identified as a composite landscape that emerged out of field work conducted at “Moose Factory, the Polar Bear Provincial Park, and adjacent Aboriginal communities of Peawanuk and Fort Sevem, the Churchill area of northern

Manitoba, Baker Lake [and] Baker lake in Nunavut” (1213-1214). Harpley relates that specific aspects of each of these sites were “skillfully woven into the existing geomorphology of the project site” (1214).

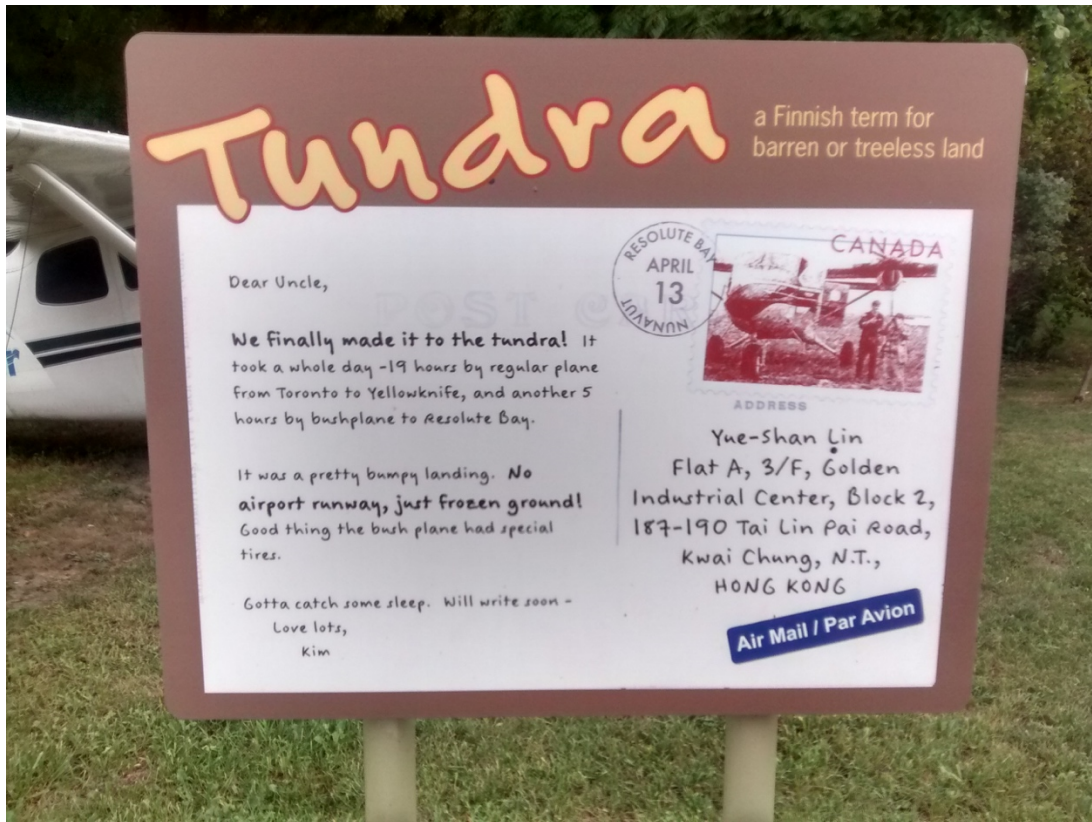
The pathway of the “Tundra Trek” is a minutely sloping and heavily meandering court (see figure 32) rather than a steep straight line leading, like the “Canadian Domain,” to two panoramic dead ends (see figure 16). In the centre of the court is the arctic wolf exhibit, the snowy owl aviary, replicas of tipis and a children's narrated walkway with a First Nations theme. On the periphery of the court is the three-stage polar bear exhibit with underwater viewing, European reindeer, Inuit rock outcroppings, migratory waterfowl and snow goose exhibits, and concrete and wire fenced holding pen for arctic wolves. While the pathway itself is gentle, the landscape around it is a variable topography of visibly different configurations of tree and plant species and large real and artificial rocks. Both the animal exhibits and the decorative terrain flanking the path generally slope upwards and overlap, and thus limits (and directs) the viewer's gaze once inside this zoological display with natureculture aspirations.

Although the Coca Cola vending machines are arguably still the most vibrant and illuminated features, the diverse and ever-present signage, blue pools of water, richly stained golden wooden fences, yellow and white flowering plants, birch trees, dark coniferous vegetation, and creatively painted purple/blue/grey-blue hued artificial rocks clearly extend the colours of the tundra beyond the “Canadian Domain's” more moderate palette of primarily green and brown tones.

The “Tundra Trek” displays far fewer animals than the “Canadian Domain,” but what it lacks in numbers and species diversity it makes up for in information, which is authenticated through the processes of embodiment fostered along the walk (Macpherson 2010), as well as

cultural artifacts and consumer culture that similarly provide direction and validation to visitor experiences and understandings. Present within its boundaries are over one hundred signs related to trivia of one form of another and, as related previously: a bush plane, a prospector's tent, an abandoned canoe and motorboat, rusted oil drums, a replica of a bowhead whale skeleton, numerous pockets of wooden shipping boxes, a weather station, a coin press, a large digital screen, two large replicas of tipis with artificial firepits, two different vending stations for soft drinks, an inukshuk, a covered wooden bridge, a bear removal device, a trading outpost replica with Tim Horton's Express and Beavertails Lodge kiosks that doubles as the zoo-mobile stop for the area, a TundraAir zipline that spans the length of the exhibit, a Caribou Café that houses a TZ Grill and a Pizza Pizza, and, when seasonably profitable, ice cream and popsicle vendors.

Similarly curated, the terrain of the "Tundra Trek" is a variable and shifting series of heavily staged "habitats," which contrasts with the "Canadian Domain's" homogeneous forest and numerous, almost identical, exhibits. Variation on a theme, rather than repetition, appears as the guiding motif—thematically giving shape and meaning to the exhibit and in terms of shaping visitor experiences and perspectives as they pass through it. Each species is staged *slightly* differently, a strategy that culminates in, and thus communicates, an image of Canadian tundra that is heterogeneous and variable—much like the referenced interests of its human inhabitants and visitors. Although there is indeed a sign, which explains that the word "tundra" is Finnish in origin and means "barren or treeless land," this land is anything but empty (see figure 33 below).<sup>54</sup>



**Figure 33: Tundra postcard sign at the Toronto Zoo. Photograph by Author, 2017.**

Although appearing dramatically different from the “Canadian Domain” in terms of its contemporary, overlapping, information-rich design, how does the “Tundra Trek” engage with the conceptions of the North identified by Shields (1991)? Although still popularly imagined as a wasteland, the “Tundra Trek” design subvert this hegemonic and homogeneous cultural vision by creating a terrain positively littered with signs of human presence and penetrated by human culture(s). Located conveniently on the zoo-mobile route, and within short walking distance from other popular “geographical” areas, the food outlets, “airport” and numerous postcard testimonials postmarked to individuals across the globe, the tundra is positioned as a convenient, accessible node within a trade and travel network of global proportions. The visitor pathways are neither arduous, monotonous, or particularly lonely as the ground and incline easily accommodates feet, wheelchairs, and strollers. All the signs, positioned

at intervals of approximately three metres, remind visitors—perhaps too often—that this wilderness abounds with both human and animal beings—what Jane Bennet might call “vibrant matter” (2010). While individual displays may mimic the appearance of actual areas of tundra, and are admittedly beautiful and free of human artifacts, the many viewing perspectives available, combined with the legion of cultural objects beside enclosures, encourages visitors to view the animals as living in the landscape with people rather than as lone emissaries, or wild extensions of it.<sup>55</sup>

There is an abundance of information present regarding climate change posted along the “Tundra Trek.” Consequently, the intent appears to be the staging of an embodiment of a proliferate natural area threatened by the use of contemporary resources, rather than a contemporary area full of proliferate natural resources. Because of the depiction of the many human groups that are utilizing the land, the “Tundra Trek” only extends the idea of the North as a resource into new arenas. While noticeably quiet on issues of current and future northern energy exploration, the references to indigenous groups, science, and tourism conjures a semblance of a northern wilderness typified by a polymorphous yet still instrumental articulation of value, rather than only a brutish and unimaginative one.<sup>56</sup>

Individual animals’ bodies also seem polymorphous as they are choreographed as valuable spiritual, scientific, and touristic resources. Correspondingly, rather than being staged within enclosures that highlight their passivity and rustic domestication, animals are embedded within a ‘wild’ terrain seemingly ripe with the potential for movement. Embedded within their respective landscapes, animals can be visualised as beings that could evoke sacred associations, could become the focus of a ceremonial or practical hunt, could act as an object of study for scientists in the field, or could be part of a natural spectacle for tourists. The fact that they are

often practically inert while on display does not necessarily negate the possibility of their choreographic participation in the visions unfolding in the mind of a visitor in motion.

The depiction of the North as a site of animal-human cohabitation and a place happily shared between different human groups instills a new type of informed ignorance in the visitor by obscuring very real issues that unfold within tundra geographies. The cohabitation of the land in “Tundra Trek” is depicted without real conflict, and therefore without reference to very real phenomena, practices, politics, and groups that might blemish its otherwise pale complexion. As mentioned previously, there is little emphasis placed on depicting the tundra as a rich source for mineral and fossil fuel deposits with extraction processes and transportation practices that compromise the fragile ecosystem, nor is it highlighted as a reservoir of accumulating toxic chemicals, a site of strategic tactical importance and contested military presence, or a place beset by traditional and emerging land and resource claims. Giving lip service to only easily digestible social, geographical, and pseudo-spiritual aspects of First Nations’ cultures, the “Tundra Trek” virtually erases a documented and extensive history of brutal colonial domination enacted on a variety of fronts against the tundra’s original human inhabitants. Considering this history, the decision to depict mainly popularized cultural emblems, rather than attempt a more sobering reflection on the contemporary lives of real Indigenous peoples living there seems callous at best. Significantly, the “Tundra Trek” even participates in the perpetuation of threats to tundra ecosystems (which, incidentally, partially justifies the exhibit’s existence), by not identifying the capitalist consumer culture of which visitors to the zoo are an intrinsic part. Instead of encouraging critical reflection, which might discourage visitors from driving to the zoo in a car, buying commercial, mass produced food from large corporations, purchasing disposable zoo ephemera, dreaming of participating in global travel networks that effect local environments and

cultures, and supporting political action that favors corporate interests, the visitor is reassured repeatedly through messages on signage that minute change in their purchasing habits is sufficient action to keep global ice sheets intact.

In *Staging Tourism: Bodies on Display from Waikiki to Sea World* (1999), performance scholar Jane C. Desmond examines the staging of animal bodies at zoos and animal themed parks in the United States. Reflecting on the topography of early zoos as the “kinaesthetic embodiment of an imperialist eye” (145), she details historical changes to zoological design that corroborates Alexander Wilson’s assertion that zoos are “explicit, even intentional models of relation between human cultures and the natural world” (qtd. in Desmond 1999 246). Desmond pushes Wilson’s ideas further towards a more insidious argument that within the space of animal attractions “differences are marked, calibrated, measured, and mobilized politically to naturalize various social relations” (Desmond xxiv).

As an institution that is in many respects an outgrowth of nationalistic tendencies from a nation of “reluctant imperialists” (Shields 1991 193), it may not be surprising that the Toronto Zoo’s staging of animals may seem less spectacular, less commercial, and distinctly less performative than many of the institutions that Desmond examines such as Sea World, Marine World Africa, San Diego Zoo, Monterey Bay Aquarium (Desmond 1999). However, through examination of two Canadian exhibits that depict Canadian nature it is obvious that persistent cultural myths of Canadian moderation do not immunize the Toronto Zoo from partaking in the mobilization of animals and nature for the purpose of naturalizing social relations between both humans and nonhumans and between different groups of humans. Viewed historically, modifications to design formats and the resulting choreographies of materials, humans, and nonhumans at the Toronto Zoo indicates a departure from a monolithic conception of an iconic



and singular Canadian nature or identity, and a movement towards a more diversified vision in which animals act as living mediators between differentiated groups of people. However, this does not necessarily mean that representations and mobilizations of animal bodies are becoming more “truthful,” “realistic,” or “natural” but rather, that the *nature* of the status quo within Canada (and the zoo audience) has only become more differentiated over time.

The depiction of a differentiated Canadian identity may become even more pronounced at the Toronto Zoo in the near future as the institution reimagines the “Canadian Domain.” According to future plans, outlined in numerous Toronto Zoo capital documents published over the last decade, it appears this nostalgic vision of Canadian nature will soon be “extinct.” As a result of the 2003 North Zoo Site Feasibility Study and listed as part III of a project entitled the “North Zoo Site Redevelopment” (Toronto Zoo 2014), the “Canadian Domain” is scheduled to be retired as an exhibit space in order to “complete the more efficient integration of visitor site circulation changes at the Zoo by bringing key Canadian animal exhibits now in the Rouge Valley up onto the tableland” (8):

The existing Canadian Domain exhibits that are in need for major renovations for the welfare of animals and viewing by the public. The need to eliminate the long walk and steep hill at the Canadian Domain for the primary Canadian/North American animal experience is necessary because of the absence of the Domain Ride. Although the Valley is a spectacular backdrop, the area has received visitor complaints concerning the long walk and steep hill. (8)

Although worded in the language of practicality and efficiency, there is a sense that this project is also propelled by a movement away from a representation of iconic national nostalgia and towards a choreographed national mediation as the exhibit will cease to be a domesticated and

distinct 'domain' and instead become a "Canadian Wilderness Orientation Centre" (8) that even features a "drive-through bison/elk paddock". Through these changes, Canadian animals will become efficiently integrated into the "global" geography of the zoo and staged within new choreographic networks that promise more opportunities for spectator circulation and exchange. However, since potential opportunities to experience the "real animals" and "real nature" of the zoo will inevitably be eclipsed by the social naturalization of an ever-evolving Canadian identity, it is questionable if, as Colombo teased in *Riverdale Lion*, the Toronto Zoo will ever manage to stage the animals living there as themselves.

## CHAPTER 3

### ZOOMORPHIC BODIES: *ARK* AND *ARCHE*

*We are not, in these dances, saying something. We are simple-minded enough to think that if we were saying something we would use words.*

Attributed to John Cage, qtd. in Monroe C. Beardsley, “What is Going on in a Dance” (1982)

*The map had been the first form of misdirection, for what is a map but a way of emphasizing some things and making other things invisible?*

Jeff VanderMeer, *Area X* (2014)

This chapter is concerned with *ARK* (Osborn and Baskerville 2018a) and *ARCHE* (Osborn and Baskerville 2018b), two similar, yet very different, dance-based research-as-creation works initiated respectively in 2015 and 2016 and performed alongside one another in 2018. Recordings of these performances accompany the text of this dissertation as online video resources (see Appendix A and B). *ARK* and *ARCHE* are extended artistic dialogues with the real and virtual physical space and real and virtual inhabitants of the Toronto Zoo and the Berlin Zoologischer Garten. They are choreographic responses to academic responses to zoos significantly affected and inflected by ideas from scholars in dance studies, human-animal studies, and posthumanist philosophy. Initially conceived of prior to, and independently from, my dissertation research, *ARK* began its existence as a quiet companion to my academic work, which, eventually in league with *ARCHE*, persistently whispered insights about the choreographic nature of environments, the embodied relations between different species, and the often-overlooked phenomenological nature of academic research. Gradually these companions to my research began to take “center stage” and served as a means to make sense of my orientation towards the zoo, find my position within zoological scholarship, and understand my relationship

to creation as a mode of research. This chapter will outline the two works' antecedents, academic influences, domains, conceptualizations, research processes, methodological practices, production, and critical reception. Following this discussion, in Chapters 4 and 5, are kinaesthetic meditations and textual reflections that indicate how an experiential interspecies aesthetic practice grounded in movement, kinaesthetic sensing, and exploring different facets of embodied memory and perception can produce novel critical insights into the decentering of both a general humanist subject and specific dancing subjects, contribute to alternative ways of thinking about animals, and relating to zoos and their diverse inhabitants.

### **ARK: MOVING AND BEING MOVED BY ANIMALS**

*The conscious visual and sensorial presence of each of the three hundred and sixty animals is the only entryway into the execution of ARK, an entryway that has profoundly changed my way of thinking about movement creation, execution, and communication. The use of visualization, essential during the learning phase and with each execution of the piece, is profound on two levels. With each passing movement, I recall the memory of a close focus, one that is situated directly on the part, texture, color, body, or actions of the animal I am drawing from. Second, though nearly simultaneous, is a wider lens through which is seen the organization of the zoo that we visited and the geographical placement of the animal. These impressions are made visceral in movement. This use of visualization gives me combined sensations of inner and outer territory that are new and allow me to engage in a deeply somatic experience that is also replicable and strongly connected to form and specificity. I did not know this was possible. This particular balance is also what allows me to bypass strong movement patterns that exist in my body from years of training and performing, making new physical coordinations, sensations and nuances possible. The moment the animals slip away from my consciousness is the moment my physicality resorts to habit.*

Danielle Baskerville, performer of *ARK* (2017)

A 17-minute choreographic work (see Appendix A), created in collaboration with Canadian performer Danielle Baskerville, *ARK* imagines the Toronto Zoo as an anthropomorphically designed space for animals where the human body has the potential to become zoomorphically affected through kinaesthetic relations with living non-human bodies.

The conceptual image for the creation and performance of ARK is a procession of specifically nonhuman gestures unfolding within the specifically human topography of the Toronto Zoo. The work actively situates the bodies of animals as vectors for nonhuman affect. In collusion with this idea is the acknowledgement of the zoo as a forum of modernity where animal bodies are simultaneously subject, yet resistant, to ideological mediations of their bodies and identities through the undeniable presence of their perceptive animate forms—forms, which, in most cases, are visibly ill-suited for the spaces designed for them. *ARK* does not actively dispute academic critiques that are genealogically descended from John Berger’s iconic refutation of the zoo as a natural space in *Why Look at Animals* (1980), but it does propose different “ways of seeing” animals and the space of the zoo by insisting that animals are always already more than emblems of human culture.<sup>57</sup> I have, to quote Ashitaka, the animated protagonist from the Miyazaki film *Princess Mononoke* (1997), attempted to see the Toronto Zoo with “eyes unclouded by hate.” This was a difficult choice sometimes, especially when faced with a child smashing his fists on a glass case, a red panda endlessly pacing in circles, or a parent telling his son that a species of swine from Sulawesi called a Babirusa was in fact a “baby rhino.” Balancing these acts of violence, anxiety, and ignorance, acts that are perhaps perpetuated by the zoo’s very form, were moments where I witnessed humans and animals witnessing each other with wonder, curiosity, and awe—unique opportunities likewise perpetuated by the zoo’s form. Accordingly, I have resisted the urge to actively engage in ‘pity’ for the animals or ‘scorn’ for the institution of the zoo and declined to leverage either my aesthetic engagement, or Danielle’s performances, as either political platforms for a bizarre generalizable animal-rights or zoo-abolitionist agenda, or as the means to choreographically pronounce judgement on the space in any didactic fashion.

Rather than a “good” or a “bad” place, I think of the zoo as a morally ambiguous place where visitors, through facing living animals, also face up to the possibility that they are not “morally finished beings” (Gardner and Bermúdez 2003 3). Within the work, this ambiguity is visible as an intentionally evoked, continual tension between the animal body that teaches about unimagined possibilities of human movement and the animal body that teaches about human failure—a tension made palatable through attention to the specific aspects of animal bodies coupled with the deliberate truncation of the unfolding of that movement within space. Thus, in a sense, the zoo produces a vision of its own ‘ethics,’ and ‘judges’ aspects of itself when translated into a kinaesthetic choreography.

The subject of movement is not entirely absent from academic discussions of the zoo. Different researchers routinely refer to the lack, or reduced movement, of animals, the stereotypic movement of animals, and prescribed modes of bodily training.<sup>58</sup> Contemporary tacit relations between human and animal bodies at the zoo are only beginning to be studiously examined outside of animal behaviour or design contexts.<sup>59</sup> Consequently, the bodies of animals at the zoo are often seen as *only* prisoners, failed avatars, pale shadows of their wild brethren, or de-natured bodies warped by cultural constructions, commerce, and politics.<sup>60</sup> By approaching the zoological garden as a living space through the lens of dance, I have found the zoo to be a space of personal, creative, contemplative, and philosophical discovery overflowing with real bodies, complex movement, and negotiated multispecies-relational choreographies. I have seen a myriad of unique articulations, rhythms, and exchanges—a breathing collection of wildly different modes of inhabiting, navigating, and experiencing the world staged and contained by our uneven and inadequate understanding of animals.

My kinaesthetic zoological observations are not unique. In *Blood Memory* (1991), the memoir of modern dance pioneer Martha Graham, a pacing lion at the zoo (in this case, the Central Park Zoo), is discussed as vital to the development of her revolutionary approach towards movement:

I would watch this lion for hours as he'd take those great padding steps four times back and across the cage. Finally, I learned to walk that way. I learned from the lion the inevitability of return, the shifting of one's body. The shift of the weight is one key aspect of that technique, that manner of movement. (103-4)

Although the repetitive pacing of Graham's lion might be now recognized as symptomatic of the animal's discontent (and ironically Graham might have unknowingly integrated the duress, rather than any wild 'essence' of an animal, into her work), the zoo's relationship to this critical aspect of her technique is uncontested.<sup>61</sup> Similarly, another American dance icon and iconoclast, Merce Cunningham, had a lifelong interest in movement research conducted at zoos (Kisselgoff 1982). Credited with having "altered the audience's very perception of what constitutes a dance performance and explored previously inconceivable methods of putting movement together" (Kisselgoff 1982), Cunningham's studies of zoo animals and their movement provided material for specific dances, such as *Boy Who Wanted To Be A Bird* (1951) and *Solo* (1953), and for innovative choreographic material throughout his career (Macaulay 2017). Carol Teitelbaum, a former Cunningham company member, stated that it was an "offset rhythmic effect" used to create "kinetic texture" that characterized his nature-based works (Macaulay 2017).<sup>62</sup> Postmodern dance icon Simone Forti also found inspiration at the zoo. In her *Handbook in Motion* (1974) she describes her experience in Rome where

“lonely in an unfamiliar city,” she “took to spending a lot of time at the zoo,” a place where she “felt a kinship with those encapsulated beings” (91). She “found herself passing into a form of passive identification with the animals” as they “too, were cut off from their natural environments, and in the zoo space even ear to foot had a different relationship to each other than when they were also in relation to the terrain with which they once formed a whole new system” (91). The result of her immersion in the zoo environment was a dance work in four parts entitled *Sleep Walkers* (1968). According to Forti, the piece, as a whole, was her attempt “to achieve a kind of concentration that I found in some of the animals at the zoo.” She thought of the work as “zoo mantras” (91).<sup>63</sup>

In “Dancing the Animal to Open the Human: For a New Poetics of Locomotion” (2010), dance scholar Gabriele Brandstetter reflects not on the zoo, but on the theoretical importance of the figure of the animal to dance in light of Giorgio Agamben's statement: “Man is the animal that must recognize itself as human to be human” (qtd. in Brandstetter 2010 9). Brandstetter asserts that the “boundary between man and animal runs through man” (2010 6), a situation highlighted by the paradoxical means through which a dancer “adopts the movements of an animal, dissimulating his ‘human’ nature by presenting himself as ‘animal’ for *cultural* reasons. And by so doing, by becoming an animal he underlines his continuing existence as a man” (5). Referring to the anthropological theories of Alfred Gehlen and the mimetic theories of Aristotle (1961), Walter Benjamin (1978), Gunter Gebauer and Christoph Wulf (1995), Brandstetter explores the resonances of this idea through reference to theatrical and social dances which evoke the figure of the animal including Nijinsky's *Rite of Spring* (1913), Fokine's *Dying Swan* (1905), Ragtime dances, Merce Cunningham's *Beach Birds* (1991), Jan Fabre's *Vervalsing zoals*



*ze is, onvervalst* (1992), Wim Vandekeybus' *It* (2002), and William Forsythe's *Decreation* (2003). Reflecting on these works, she recognizes that “the physical reflection of the ‘animal’ and ‘animal locomotion’ in dance also implies the possibility of giving movement expression to the fleetingness, the vulnerability, the aliveness of the ‘Other’” (5). Appropriating the term “decreation” from the aforementioned Forsythe work, Brandstetter postulates that the opportunity the animal body provides to the dancer is the opportunity to “de-create” him or herself as conventionally human (10).

In *Over the Human: Post-humanism and the Concept of Animal Epiphany* (2017) Italian veterinary doctor, ethologist, and philosopher Roberto Marchesini describes “animal epiphany.” It is the paradoxical productive conjunction and disruptive disjunction that occurs in the encounter between the human animal and the nonhuman animal. Animal epiphany is triggered by our simultaneous awareness of sameness and difference in animals. It is based on the recognition of a shared animal-being grounded in the sharing of particular predicates “such as the experience of suffering, moving in search for something, interpreting the here-and-now, self-expression, vulnerability to the world, reproduction” (96) alongside the recognition of significant embodied difference in the form of predicates characterized “by particular sensory windows, dispositions, perceptive Gestalts, or discriminative, cognitive, categorial and correlative functions, which are the outcome of particular phylogenetic processes” (98). The “epiphany” for the human subject is that existence could be otherwise and that the world is multiple and comprised of multiple worlds inhabited with plural intelligences (Marchesini 2016). According to Marchesini, this epiphanic experience goes significantly beyond mere appreciation:

Undoubtedly, the flight of a bird has something majestic and impressive about it. And yet, if an eagle's large circles, an albatross' gliding, a hawk's diving, a hummingbird's

mid-air stillness were nothing more than a phenomenon to the human being—just like a waterfall, a mountain, or a hurricane—as sublime as they can be, these events would not be able to announce a different existential dimension. For a bird’s flight to be an epiphanic event, the human being must see itself in the flight: there must be an overlapping between the human being and the bird—the emergence of a bird-shaped man, or a reflection of the human in the bird. The flight enters the human body, which suddenly feels the convulsive movement of the bird’s wings and the freedom coming from being able to fly. At the same time, man is projected into the bird’s body and from that height he can consider with greater objectivity the narrow position of his own body, but also the vertigo caused by his new existential dimension. He feels the need to redefine his Umwelt. (2017 96)

Marchesini positions animal epiphany as significantly more than one singular event, and a faculty of a dialogic being who continually develops through relations with other living things, and, a process ultimately responsible for initiating cultural, technological, and artistic developments and practices. Thus, for Marchesini human *culture* has never existed outside of *nature* but always developed in relation with an always elaborative multispecies world—our elaborations of nature are in fact our own “nature” at work.

At first glance, Roberto Marcheseni’s concept of “animal epiphany” appears to resonate with aspects of Brandstetter’s “decreation” as both gesture towards the animal as a gateway figure leading to human transformation. However, in Marcheseni’s conceptualization of human animal relations the human does not only have a dialogue with himself via the figure of the animal. Rather, recognizing the animal as a subjective and animate being like him or herself, the human engages in a somatic dialogue *with* the animal that is both creative and destructive. The

results of this dialogue are the awareness of the possibility of new sensorial, affective, and practical dimensions for human life *and* a “decentering,” however brief, of the human subject from an anthropocentric orientation.

Unlike Brandstetter’s figuration of the mimetic process in which the human takes on animal form “for cultural reasons” (5), within Marcheseni’s work the mimetic process is part and parcel of a human evolutionary heritage that, rather than being determinative, exhibits an adaptive and open “nature” to new circumstances and new relations. Whereas in Brandstetter’s figuration the divide between human and animals is ultimately unspannable, within Marcheseni’s work the very same chasm is navigable. Although this journey across the human-animal divide is possible and potentially generative, it is associated with inherent ontological and epistemological risks, as animal epiphany “shows a possible world, but mostly it modifies our perceived destiny, the horizon of the goals that the human being can reach” (105) and so the toll exacted is indeterminable beforehand and subjects may, upon return, find themselves transformed “irreversibly changed” (105) into altogether new creatures. Thus, in this context, the adage “once bitten, twice shy” has new resonances for disciples of humanism.

The potential for animals to affect human bodies and practices has also been examined within the work of phenomenologist Alphonso Lingis. Here, living animal bodies and their motion are positioned as tonics to counter the stagnating hegemonic forces of cultural habit by injecting difference into human lives while prompting awareness about the shifting sensual threads with entwine human bodies with other forms of life. In “Animal Body, Inhuman Face” (1997), Lingis examines ways that kinaesthetic relations with animals and their bodies provide points of entry for humans to understand and interpret themselves and to relate to others. Reflecting on how “our legs plod with elephantine torpor; decked out fashionably we catwalk;

our hands swing with penguin veracity; our fingers drum with nuthatch insistence” (114), Lingis poetically situates animals as bodies that disrupt, enhance, and elaborate “human” experience and as kinaesthetic means to ornament, decorate, and perhaps “de-create” or “decenter” (depending on your philosophical orientation), social existence. Lingis’s brief, yet lush and visceral essay is significantly influenced by Deleuze and Guattari’s ideas on “becoming animal” developed in *A Thousand Plateaus* (2011 [1987]) and Levinas’s ideas of facing others with responsibility (1978). In a work literally brimming with vivid and moving passages, the image of the human body as an assemblage of multiple bodies, operating in concert with the forces of other “natural” and “cultural” assemblages stands out:

Our bodies are coral reefs teeming with polyps, sponges, gorgonians, and free-swimming macrophages continually stirred by monsoon climates of moist air, blood, and bile. Movements do not get launched by an agent against masses of inertia; we move in an environment of air currents, rustling trees, and animate bodies. Our movements are stirred by the coursing of blood, the pulse of the wind, the reedy rhythms of the cicadas in the autumn trees, the whirl of passing cars, the bounding of squirrels and the tense, poised pause of deer. (114)

Lingis’s poetic blending of nature and culture and insistence that human life is significantly inflected by the lives of nonhumans echoes the philosophical orientation of many scholars associated with the “non-human turn.”<sup>64</sup> However, rather than creatively articulating the vision of just one thinker or a particular school of thinkers, *ARK* (2018) can be viewed as a bricolage assembled from fragments of thought from many research ecologies including works of philosophy, animal studies, literary studies, science and

technology studies, feminist scholarship, posthumanism, ethology, dance studies, and historical dance literature.

Within dance studies contexts inspiration for ARK has come from thinkers who focus on extended conceptualizations of the “choreographic,” such as anthropologist Sally Ann Ness (1992, 2008, 2016, forthcoming), performance studies scholar André Lepecki (2006, 2013, 2016), and literary scholar Andrew Hewitt (2005). Their works, although focused specifically on other cultural forums, create the theoretical conditions for beginning to think past anthropocentric constellations of human dance and animal movement in order to explore the possibility of humans *and* animals at the zoo as interacting in a choreographic manner. Perhaps most closely attuned to my approach is dance anthropologist Sally Ann Ness, who states:

a choreographic perspective views all animal bodies, human bodies included—and not excepting the researcher’s own—as fundamentally interesting *instruments* of worldly discovery. Bodies, employed choreographically, disclose movingly what (and who) it is that matters to them in the spaces, places, environments, and landscapes that are made available through them. In this instrumental, exploratory regard, a choreographic approach necessarily foregrounds aspects of embodied conduct that are intersomatically, co-performatively *semiotic* and communicative. (forthcoming)

The ethnographic works of dance and performance scholars such as Dierdre Sklar (1991, 1994, 2000, 2008 [2001]), Cynthia Novack (1990), Tomie Hahn (2007), and Sally Ann Ness (1992) are also significant inspirations. Considered collectively, this group of scholars write conscientiously about participatory engagement through movement,

personal bodily experience, somatic modes of understanding, and the potential for kinaesthetic understanding between human subjects located within particular historical moments and specific cultural contexts. Using interdisciplinary hybrid methodologies, these scholars integrate theoretical ideas from outside of dance including the somatic anthropological work of Thomas Csordas (1990, 1993), the proxemics work of Edward Hall (1969 [1966], 1989 [1983]), theoretical analyses of space and place forwarded by Michael de Certeau (1988 [1984]), and neuroscientific accounts of embodied cognition from researchers such as George Lakoff and Mark Johnson (1999, 2011 [1980]). They operate on the assumption that subjectivity and culture are both embodied. With concepts of subjectivity and culture now being actively applied to nonhuman animals and animal communities (Lestel 2002), their work implicitly speaks to the potential of understanding or interpreting affective bodily relations between humans and animals through shared bodily experiences. Particularly generative is Sklar's concept of kinesthetic empathy—"the capacity to participate with another's movement or another's sensory experience of movement" (1994 15). Informed by James Clifford's work on rapport (1988), Daniel Stern's perceptual studies of infants (1985), Mark Johnson's work on "perceptual orderings of bodily experience" (1987), and Maxine Sheets-Johnstone's figuration of language as post-kinetic (1990), Sklar's figuration of kinesthetic empathy "implies that, while movement can be interpreted symbolically as if it were a text, it is also immediately available to be experienced vicariously in mimesis" (1994 14).

Similarly inspirational is John Martin's concept of "metakinesis" (1965 [1933], 1989 [1965]) developed from theories of expression theorized by Ausdrucktanz artists

(Noland 2010 51) and Theodor Lipps's notion of empathy (Carroll and Seeley 2013 177).

According to Martin:

we respond muscularly to the strains in architectural masses and the attitudes of rocks...and respond even more vigorously to the action of a body exactly like our own [...] Motor responses are registered by our movement sense receptors, and awaken appropriate emotional associations akin to those which have animated the dancer in the first place. It is the dancer's whole function to lead us into imitating his actions with our faculty for inner mimicry in order that we may experience his feeling. Facts he could tell us, but feeling he cannot convey in any other way than by arousing them through sympathetic action." (1989 [1965] 23)

Although the animal body absent from this figuration, Martin's theory leaves the door open to interspecies kinaesthetic relations in the form of "sympathetic muscular" (1965 [1933] 12) transference between humans and animals. Although animals certainly do not possess "a body exactly like our own" partial transfer of nonhuman affects and emotional sensations might even be possible as, according to Martin, "movement is a medium for the transference of an aesthetic and emotional concept from the consciousness of one individual to that of another" (1965 [1933] 13).

The work of dance phenomenologists Sandra Fraleigh (1998) and Maxine Sheets-Johnstone (2009) also examines the relations between subjective bodies and their environments. Fraleigh's work, as musicologist Hollis Taylor has remarked (2016), asks the insightful question not "what is dance?" but rather, "when is dance happening?" (Fraleigh 1998 140), and implores that dance be understood as experiential and subjective rather than as an objective phenomenon. In a different, but related vein, Sheets-

Johnstone, argues against an exclusively linguistic basis for thought, and demands that human and nonhuman animal consciousness be understood as corporeally unfolding out of the “kinetic bodily logos” (2009a [1981] 53) inherent to diverse “animate forms” of life (2009b [1998] 170). For Sheets-Johnstone, “*thinking in movement* is our primary way of making sense of the world” (2009a [1981] 43) and her work reminds us that “in an adult world, we easily lose sight of movement and of our fundamental capacity to think in movement. Any time we care to turn our attention to it, however, there it is” (61).

A broad spectrum of thinkers outside of dance studies have also influenced *ARK*. Generally, these authors, like Lingis, have complicated, challenged, blurred, or diminished the boundaries conventionally drawn between both humans and animals *and* nature and culture and advocated, implicitly or explicitly, against rigid univocal theories of either cultural or biological determinism. Jakob von Uexküll is a primary figure in this sense. His *A Foray in the World of Humans and Animals* (2010 [1934]) articulates the concept of the *umwelt* and situates both human and nonhuman animals as sensual interpreters and producers of meaning within subjective worlds. I was introduced to Uexküll’s work by Dr. Janine Marchessault and since digesting its contents have returned to it for insight again and again. It is a well of fascinating ideas particularly generative for thinking about the borders between humans and animals, the continuities and discontinuities between different human worlds and between human and animal worlds, the sensorial basis for forms of art—including dance—and the sensorial basis for specific pedagogical regimes and performative or representational “worlds,” and in a more general fashion, for conscientiously understanding, on a daily level, the elaboration of choreographic difference by the human and nonhuman forms of life around me. Kaveli



Kull's (2001), Brent Buchanan's (2008), and Carlo Brentari's (2015) examinations of Uexküll's legacy outline his theory's effects on 20<sup>th</sup> century thought. All three authors contextualize Uexküll as a major, and perhaps underacknowledged intellectual figure, whose ideas were interpreted and adapted in diverse ways by philosophers, psychologists and biologists.

Particularly influenced by Uexküll are scholars working within or alongside the fields of zoosemiotics, biosemiotics, and theoretical biology. These include Thomas Sebeok (1968, 1975, 1979), Jesper Hoffmeyer (2008a, 2008b), Kaveli Kull (2004), Timo Maran (2014, 2016, 2017), Morten Tønnessen (2009, 2014), Dario Martinelli (2004), and Wendy Wheeler (2006, 2010, 2016). These authors, in different ways, consciously develop and adapt Uexküll's basic concepts relating to human and animal ways of knowing and stress the overlapping and shifting, rather than separate and fixed, relations between them. Consequently, their work complicates simplistic distinctions between the human and the nonhuman and between nature and culture. Collectively considered, these scholars argue for a more nuanced understanding of life predicated on the acknowledgment of semiosis as an immanent feature of all life, the realization that linguistic modes of communication are part of, rather than outside of, natural processes, and that conviction the animal world is permeated by meaningful action and multiple forms of consciousness. Their work supports my "instinct" that meaningful communication and exchange has the potential to occur between animals of the same species and between animals of different species provided we creatively negotiate, rather than fix, terms of engagement.

Similarly generative is scholarship that is critical of, yet not hostile to, dialogues with scientific ideas that promote and interrogate concepts of continuity, discontinuity, and relationality between distinct forms of life. In *Becoming Undone: Darwinian Reflections on Life, Politics, and Art* (2011), feminist philosopher Elizabeth Grosz consciously rearticulates Darwinian evolutionary thinking through examining Darwin's ideas regarding sexual selection outlined in his works, *The Descent of Man, and Selection in Relation to Sex* (1981 [1871]) and *Expression of the Emotions in Man and Animal* (2015 [1872]). She advocates for an understanding of art as an elaboration of life propelled by sexual difference and desire and underlines opportunities to become "unrecognizable" (Grosz 2017). Grosz's work insists that thinking with evolutionary ideas can be revolutionary, rather than merely regressive; In *Staying with the Trouble: Making Kin in the Anthropocene* (2016), *When Species Meet* (2008), and *The Companion Species Manifesto* (2003), primatologist and critical feminist thinker Donna Haraway investigates the historically-situated relations between species within contemporary naturecultures. Foregrounding the potential for species to relate to one another, interact in meaningful ways, and have profound effects on one another in interpenetrating social, cultural, creative, embodied, and genetic contexts, Haraway's work demands that anthropological and biological concepts of kinship and even species be reevaluated and reoriented in recognition of lived, rather than idealized realities. Her work emphasizes that living in a complex, morally ambiguous world, during a complex time period called the "Anthropocene, Capitalocene, Plantationocene or Cthulucene" (2015) requires an unsentimental, yet utopian orientation towards living that she terms "staying with the trouble" (2016); In *Images of Animals* (1999), science and technology scholar Eileen Crist examines literary representations of animal consciousness through tracking changes in the language used in nineteenth and twentieth century

animal behaviour literature. Her work draws attention to how anthropomorphic depictions of animals create “alignment between human and animal worlds” while “mechanomorphic” depictions “maintain a distance between them” (24); Similarly, in *Thinking with Animals* (2005), Lorraine Daston and Greg Mitman gather together interdisciplinary work that interrogates the concept of anthropomorphism in a variety of contexts and reveal its changing “nature.”

Articulating naturecultures and exploring anthropomorphism from an anthropological perspective is the multispecies ethnographic work of anthropologists such as Eben Kirksey (2014; Helmreich and Kirksey 2010), Agustin Fuentes (2010), Anna Tsing (2015), Eduardo Kohn (2015), and Stefan Helmreich (2009; Helmreich and Kirksey 2010). These authors investigate the diverse, yet historically contingent, and always culturally specific ways humans and nonhumans exist together, or are imagined existing together, in different contexts where the biological and the cultural are irrevocably entangled. Rather than viewing nature and culture as distinct and oppositional categories, multispecies anthropological approaches stress the many complex interactions occurring between species, and work towards dissipating the once firm boundaries between the human and nonhuman entrenched within anthropological discourse. Multispecies ethnographic projects often highlight, like Haraway’s work, opportunities for creative or even artistic relations between species (Kirksey 2014). Sitting outside this group is anthropologist Tim Ingold who, in a different fashion, demonstrates a critical commitment to both understanding animals in more accurate terms and exploring the actions of living bodies who become enskilled through worldly action, embodied practice, and participation (1988, 2000, 2006, 2011a, 2011b, 2016). Self-admittedly more anthropocentric than many human-animal scholars, Ingold concludes his essay “The Animal in the Study of Humanity” (2011) with the following sobering statement: “All in all, though humans differ little from other animal species,

no more than the latter differ from one another, that difference has mighty consequence for the world we inhabit, since it is a world that, to an ever greater extent, we have made for ourselves, and that confronts us as the artificial product of human activity” (372).

More scientifically orientated are ethologists and animal researchers such as Marc Bekoff (2002, 2013), Franz De Waal (1997, 2001, 2013), Jane Goodall (1971, 1986), Barbara King (2004, 2013), Barbara Smuts (1985, 2001), Shirley Strum and Linda Fedigan (2000), and Amotz Zahavi (1991, 1997). Their detailed, extended and unorthodox, or even ‘anthropomorphic’ approaches to animal research and writing about animal lives stress continuity between humans and animals, document lived human and animal relations, describe animal subjectivity and cognition, and also gesture towards the human body as a communicative interface or mediator (Despret 2016). Their research findings and varied approaches draw the attention of ethologically-inclined philosophers such as Vinciane Despret (2008, 2013, 2016) and Dominique Lestel (2002). Both Despret and Lestel critique contemporary scientific research practices that overlook, obscure, or are opaque to animal cognition, meaning making, and subjectivity, and explore and complicate distinctions between human culture and animal nature.

Finally, the works of Deleuzian influenced scholars Ronald Bogue (2009), Manuel DeLanda (2006, 2009, 2016), Bernd Herzogenrath (2009), Ron Broglio (2011), and Claire Colebrook (2002, 2006) have also been influential, especially with regard to generating a vocabulary with which to articulate my ideas. These scholars, in different ways, critique, interpret, explain, define, deploy and elaborate upon the concepts of Deleuze and Guattari and make their ideas both adaptable and more handle-able. In particular, DeLanda’s interpretations of assemblages outlined in *Assemblage Theory*

(2016) and *A New Philosophy of Society: Assemblage Theory and Social Complexity* (2006) were invaluable conceptual tools, not only for thinking about the zoo, but for thinking about creating a work about the zoo, which recognizes and acknowledges, within its structure, the different scales, complexities, and organizational logics of zoological gardens.

The conceptual framework of *ARK* is indebted, in one way or another, to extended and brief exposure to information from all of these divergent sources. Digesting their contents has been extremely generative for thinking about human and animal bodies and for speculating about opportunities for relating to other bodies. It has also been confusing and disorienting. Consequently, this choreographic work attempts to approach the Toronto Zoo simultaneously as: a space in which human and nonhuman animal bodies produce meaning together despite meeting on unequal terms; a human-animal interface saturated and informed by, yet somehow oblivious to, difference; a curated and bounded assemblage of bodies with diverse modes of inhabiting the world with the *potential* to induce new configurations, new relations, and new trajectories for humans and nonhumans; and, a place whose spectacular staging conceptualize animals as “mechanomorphic” (Crist 1999) natural entities while ironically, creating a space where animals can be perceived as anthropomorphized, individual, encultured subjects.

*ARK* was proposed as an experimental project to a long-time dance colleague, Danielle Baskerville, during the summer of 2015. While visiting Toronto Island, a large city park located a short ferry ride away from downtown Toronto, I pitched the project to her as a kinaesthetic study of an under-examined urban space in order to create a detailed choreography that integrated visualization, explored interspecies kinaesthetic empathy, and utilised dancer-centric approaches to interpretation and performance. Sitting in lush parkland as shorebirds soared freely

overhead, Danielle was, unsurprisingly, skeptical that a zoo could yield any insights other than the predictable thematics of confinement and human domination remarked on by many zoo studies scholars. Prepared for her response, I immediately produced maps of the zoo space (see figure 34 below), images of the many animal species residing there, and a copy of “Animal Body, Inhuman Face” (Lingis 1997). I credit Lingis’s stirring, yet morally ambiguous, observations with affecting Danielle and coaxing her to commit to this project, despite her initial ethical reservations.

Our first zoo visit occurred in the early autumn of 2015 and lasted approximately six hours. Although Danielle was visibly hesitant when approaching the zoo entrance, she became less so when we were approached by a zoo employee with a bald eagle perched on his arm. Less than an arm's length away from the majestic bird who repeatedly stretched out its great wings, Danielle remarked on its sheer size, its articulation of its head, and its strong feet, which grasped the employee's arm. As curiosity worked to mediate her discomfort, we ventured through the different “zoogeographic” (Toronto Zoo 2019; Hancocks 1971) regions of the zoo. Moving counter clockwise through the zoo, as represented on the visitor map, we passed through its exhibits in the following order: “Kids Zoo,” “Eurasia Wilds,” “Australasia,” “Tundra Trek,” “The Americas,” “Canadian Domain,” “African Savanna,” “African Rainforest,” “Malaysia,” and the “Malayan Woods.” Stopping at each individual exhibit to consider its inhabitants, we discussed various aspects of the zoo, some of which I could comment on with reference to the academic literature. These aspects included: the confinement of the animals, breeding programs, cooperative initiatives between zoos, unique features of the bodies of the animals, physical gestures of the animals, the design of both the entire zoo as well as specific regions and

enclosures, and the relationships between spectators and animals, zoo keepers and animals, and spectators and zoo keepers.

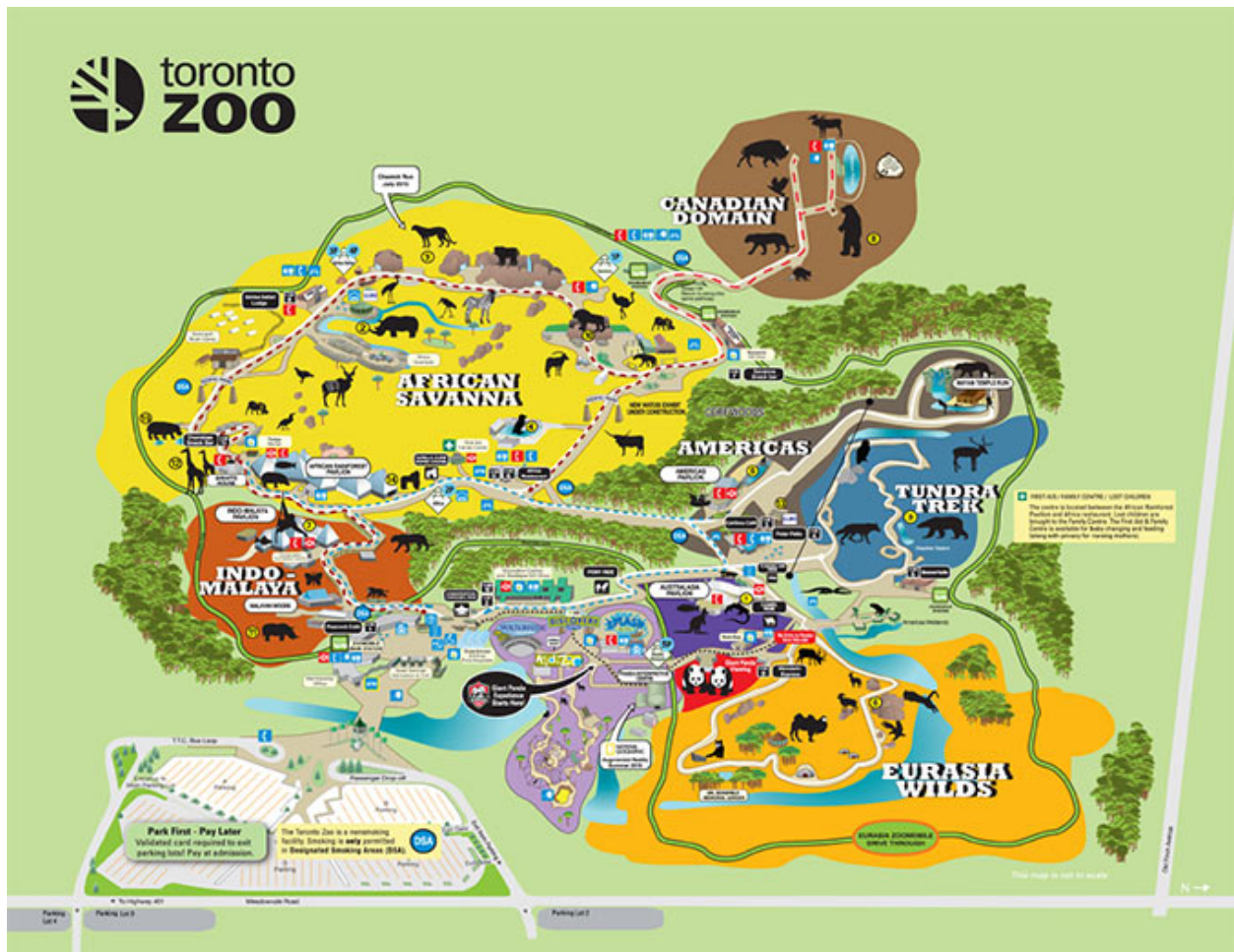


Figure 34: Map of Toronto Zoo. Toronto Zoo, 2015.

Over the course of multiple visits, we experienced the zoo as a space full of diverse bodies, ambiguities, and contradictions. We recognized that the zoo space collapsed idealistic dichotomies about personal experience and mediated engagement, culture and nature, care and domination, and freedom and confinement. We agreed that our artistic work should attempt to embody as many of these contradictions as possible rather than displace or erase them. We discussed the establishment of certain “rules,” which we would rigorously apply to the

composition in order to embed aspects of our critical observations within the work. These rules were:

1. We would use our route (as translated by the topography of the zoo map) as a means to determine the general spatial composition of the dance work. This (re)presentation would reference the manufactured human design of the zoo landscape while simultaneously creating definite spatial pathways, which referred to both our actual physical journey as zoo visitors and our continual engagement with the zoo's mediation of itself and the animals that lived there.
2. As the zoo is a “multiplicity which is made up of many heterogeneous terms” where there are “established liaisons, relations between” diverse “different natures” (Deleuze and Parnet 2002 69 as qtd. in DeLanda 2016 1) we would think of the zoo as a DeLandian assemblage of assemblages of assemblages and create “sections” to the choreographic work that replicated the organizational structure and scales of the zoo. Thus, there was a “Kids Zoo” section, an “Eurasian” section, an “Australasian” section, a “Tundra Trek” section, an “Americas” section, a “Canadian Domain” section, an “African Savanna” section, an “African Rainforest” section, a “Malaysian” section, and a “Malayan Woods” section. While not visible during performance as discrete units, these “assemblages” rendered the hyper-object-like (Morton 2013) place into a more comprehensible form and permitted our interpretation of this massively complex space.
3. We would creatively engage with every species and breed of animal that were exhibited at the zoo rather than make preferential choices about which animals deserved attention and recognition or could be the focus of an aesthetic work. We would not focus on individual members of the collection when there were numerous specimens present due



to our awareness we might not have developed the skills or aptitude to identify or differentiate them during subsequent visits. In these instances, we would focus on a collective kinaesthetic rendering through attention to the kinetics of a particular swarm, the affects of a particular pack, or a prominent feature, form, or action performed by all the members of the particular animal community present. Regardless of whether we were focusing on individuals or a collective what was crucially important to us was being creatively present and attuned to the actual creatures facing us.

4. We would choreographically enact each animal or group of animals in relation to the topographical space of the zoo and to one another. More simply put, we would reference each animal in the order we encountered them and recreate the zoo's own spatial classification of its animal bodies so as to not ignore the physical and architectural reality that assembled this assemblage of creatures together. Correspondingly, the rate at which animals were referenced would increase in areas of high animal density (notably within specific buildings) to embody the staggering amount of animal-related sensory information present.
5. We would generate detailed movements and kinaesthetic visualizations, which emerged from our observations of animal bodies, animal movement, animal rhythms, and the lived relations between animals without the need for any specific animal to be recognized by a viewer as such. Our specific sensory experience of the animal would be prioritized over the replication of persistent cultural tropes about specific species or the mimetic replication of bodies. We would not attempt to become "animal" since we both were animals already.

6. We would not aim to create a perfect correspondence between the actual dimensions of animals and the dimensions of the movements referencing them, or to always strive for a perfect correspondence between an animal body and anatomically analogous parts of our bodies. We would instead focus on how the animal body affected us and encouraged us to think about our body or imagine movement differently so that we would not demonstrate an anthropomorphic or cultural preference for one animal over another predicated on our anatomy, abilities, skills, or personal histories. Thus, we would assume all animals were charismatic.
7. We would try and honour the real animal's body, movements, and affects and avoid the temptation to anthropomorphically alter animal kinetics or animal forms so that movement became unnecessarily grandiose, spectacular, symmetric, geometric, diagrammatic, whole, or "beautiful" in terms of the conventions of the Western dance aesthetics that informed both of our dance backgrounds. Animals would provide an opportunity to think otherwise about our movement rather than complete movement in a manner consistent with a kinetic teleology informed by our training and the aesthetics that informed that training. By referencing the animal, we would, to borrow Brandstetter's term "de-create" (Brandstetter 2010) our moving "human" bodies, rather than embody animals through any one particular lens borrowed from any one modern or contemporary dance style or technique. The zoos inhabitants would, with any luck, "take us by that hand" (Marchesini 2017 93) so that we could "become unrecognizable" (Grosz 2010 [2007]). The dance would be a procession of our animal epiphanies, not a procession of animals.

8. We would attempt to keep each and every animal movement phrase distinct and separate through the evocation of specific qualitative or formal distinctions, which, when arranged linearly, would appear as kinetic differences. We would welcome the rupture of anthropocentric habits and avoid the depiction of any extended lyrical moments of kinaesthetic freedom or flow identified by scholar André Lepecki as evocative of the legacy of modernist dance (Lepecki 2006). Through these kinetic ruptures the choreography would embody the presence of the very real physical barriers at the zoo that create the “habitats” and separate animals from one another, from people, and from a general environment. Within the choreography, the continual evocation of these fragmented “habitats” would serve to limit the enacting of any extended human “habitus” (Bourdieu 1977, 1984).

After these “rules” were finalized, I returned to the zoo alone twenty more times to create a comprehensive document, which would eventually become the organizational schematic, the textual assemblage of an assemblage of assemblages of assemblages, or, in other words, the choreographic “score” for the dance.<sup>65</sup> Updated periodically in response to new observations and embodied memories, the score eventually was “finalized” and contained 360 individual entries, each one referencing one kind (either species or breed) of mammal, bird, reptile, amphibian, fish, or invertebrate. Breaking down the score into discrete sections that referenced specific exhibition areas, the specific numbers for each area were: Kids Zoo (10 Species and 2 Breeds of Domestic Goat), Eurasia (14 Species), Australasia (56 Species), Tundra Trek (5 Species), Americas (75 Species), Canadian Domain (25 Species), African Savanna (20 Species and 1 Breed of Domestic Cattle), African Rainforest (56 Species), Indomalaya (48 Species), and Malayan Woods (48 Species). A complete list of all animal species, in the order they are referenced in *ARK* is

available by referring to the choreographic score (see Appendix A). All animals are listed alongside the specific choreographic notes created by Danielle, for her reference, during the working period.

With the score/resource document completed we could begin to create choreographic material. However, before entering the studio, we returned to the zoo to once again examine the animals together and align our observations with the rules and conceptual framework we had generated. Our first action in the studio in the spring of 2016 was to “walk the space of the zoo” in the space of the studio and decide where the choreography would begin, unfold, and end. Through repeated reference to the zoo map and discussions about its natureculture landscape, we transferred aspects of the zoo topography onto the studio floor, gradually gaining a sense of where each choreographic assemblage existed in relation to each other within the frame of the studio space. We decided that the upstage center of the space would be the entrance (and consequently the exit to the zoo) and organized the spatial relations of the other sections accordingly (this can be rudimentarily envisioned by turning the zoo map upside down). After an embodied deliberation otherwise known as trial and error, we decided that architecture of the interior spaces of the zoo would not be represented with any exact verisimilitude due to their complicated layout, the spatial limitations inherent in reducing a site that was 2.87 square kilometers to the much smaller dimensions of a conventional dance studio, and in order to avoid miniaturizing our kinaesthetic reflections. However, the animals within the space would still retain their fixed and specific, institutionally set relationship with one other.

With a rudimentary mapping of the space complete we began to generate choreographic material from our memories of the animals, a process which was a discussion of verbal and kinaesthetic dimensions that aligned our sense and sensibilities. Work in the studio proceeded

linearly, and the choreographic composition was, very slowly, created over a period of months, working without music, one animal, or group of animals, at a time. We did not utilize one specific method for generating choreography, but instead gradually developed a set of zoomorphic visualization strategies that Danielle likened to “sensorial haiku”—our somatic responses to our sensorial observations and embodied recollections. These visualizations aimed at pairing a specific movement or set of movements with a rich kinetic image of the animal body, part of the animal body, or a group of animal bodies. Once completed, a personal description of the movement was recorded by Danielle into the score for *her* future reference. Individual movement phrases were linked to one another in a procedural, linear process that utilized the end of a particular movement phrase as the starting place for the next one. Qualitative aspects of movement were not retained from one phrase to the next as each phrase began and ended in a microscopic static moment that we understood as analogous to the barriers between animals where no motion could occur. The new movement phrase would be a pairing of a new gesture or action with an equally new visualization generated from observation of the “new” species that maintained the relative spatial relations established between the animal and its relative topographical location. Through this process, movements sequenced from one another, not through gradual metamorphosis and flow, but through kinaesthetic ruptures. These ruptures prevented the creation of a visual or kinetic sense of unbounded space or the evocation of a specific grand narrative within the choreography.

A detailed examination of one short section of *ARK* may illuminate aspects of this process. The Tundra Trek section of *ARK* is one of the briefest sections of the work and contains the least number of animal species. In the online video, it begins at 5:22 and ends at 5:58, occurs slightly upstage of the centre of stage right, and is organized around the geometry of the

meandering loop that visitors travel along. Although the region can be accessed in a clockwise or counter clockwise fashion, during our visit we always travelled counter clockwise and encountered the animals in the following species order: polar bears, snowy owl, reindeer, snow geese, and arctic wolves. The spatial pathway that Danielle follows during this section corresponds to this experience mimics the loop like structure of the “Tundra Trek” area (see figure 33). The reindeer and snow goose are enacted at the most downstage parts of this section, the snowy owl in the center of the loop, and the polar bear and arctic wolves on the opposite sides of the most upstage portions. Our original documents *only* contained the name of the animal followed by shorthand scores note as the work was intended to not be a piece for anyone other than Danielle. If the work is ever restaged with another dancer, the entire experiential process will need to be repeated with that particular dancer. For the purpose of illuminating our creative process I have included the specific note Danielle recorded but also qualitatively elaborated on the basic image in order to explain details that are kept in mind by Danielle during her physical rendering of the hundreds of “sensorial haiku” that constitute the choreography. Also indicated are the timeframes within which specific actions occur so a reader may observe these visualizations unfolding while watching the recording.

#### **TUNDRA TREK ASSEMBLAGE (5:22-5:58)**

1. **Polar Bear (5:22-5:30) Score Note:** Slow heavy sink to knees and elbows, focus turns away upstage right. **Detailed Explanation of Note:** The body is imagined taking on the dimensions and mass of a polar bear sitting upright under the water that we observed through the exhibit's viewing tank. The mammoth body slowly yet decidedly sinks and becomes submerged under the water—eventually coming to rest on all fours. The water

supports the massive body's substantial weight as waves of undulating thick white hair flow around it.

2. **Snowy Owl (5:31-5:37) Score Note:** Come up onto hands, ripple contraction into release sends the body over the right knee/thigh. Rising halfway through clavicle wings, then come up with windy feather foot, still focus. **Detailed Explanation of Note:** Placing the image of the owl's long wings into the torso, the body unfurls as though jumping into flight. These same wings then move into the collarbones, suspended momentarily in flight, while the left foot reflects the action of the wind ruffling through the owl's thick feathers.
3. **Reindeer (5:38-5:47). Score Note:** Kick grab with right foot then left. **Detailed Explanation of Note:** Rising onto all fours the body creeps forward and the feet are imagined as tiny hoofs attentively digging into the snow in order to uncover hidden vegetation. The use of this image results in an action that disrupts prescriptive uses of the limb, which, in conventional dance settings, stress a particular coordination between the hip, knee, and ankle joints.
4. **Snow Goose (5:48-5:51) Score Note:** Breastbone/scapula wing action ~ small. **Detailed Explanation of the Note:** The body turns quickly and transfers from a four-legged position to kneeling position with the upper body hinged back. The quick action of wings beating is transferred into the semi-mobile area between the scapula and the breastbone and results in a rapid pulsing action.
5. **Arctic Wolf (5:52-5:58) Score Note:** Japanese *kabuki* wolves (elbows and knees). **Detailed Explanation of the Note:** 1. Beginning in a kneeling position the body is imagined as the neck and head of a wolf stretching up into a high vertical position, the

crown of the head is imagined to be where the nose/nostrils are located, using this image the body is shifted into position for part two of the movement: The knees and elbows are imagined to be individual members of a pack of wolves first moving independently and then, after an event that draws their attention, collectively as a pack. Both images reference behaviour seen during observation of the wolves at the zoo.

With regards to the entire work, specific beginning and ending times for other sections of *ARK* are: Kids Zoo (0:31-0:56), Eurasia (0:57-2:17), Australasia (2:18-5:22), The Americas (5:58-9:08), The Canadian Domain (9:09-10:17), African Savannah (10:18-11:50), African Rainforest (11:51-13:26), Indomalaya (13:27-15:46), Malayan Woods (15:47-17:10). In addition, an annotated copy of the video of *ARK* in which the entire dance is accompanied by text that relays the species and zoological area of each choreographic phrase present in the dance as it is enacted by Danielle (see Appendix A).

The basic structure and choreography of *ARK* was completed in the summer of 2016 and the work was shown a number of times in the studio to transition it from a movement research study to a performance piece. Initial showings were private and attended by Patricia Beatty, an artistic mentor and icon of Canadian modern dance. I was interested in working with Beatty because of her interest in formal aspects of modern dance and her history of creating works referencing the natural world.<sup>66</sup> Rarely hesitating to offer praise, voice objections, or propose solutions to issues she perceived in the work such as its decidedly undramatic or unelevated performance quality, unorthodox use of space, and its multiple kinetic ruptures, Beatty's presence was passionate yet removed. Invested in ideas regarding composition drawn from primarily modernist dance icons and humanist artists,<sup>67</sup> many of her ideas were in conflict with the basic concepts that informed the work, especially the ones that were not invested in a



heroically anthropomorphized or gloriously symbolic rendering of nature. Nevertheless, we did attempt to integrate, in discrete ways, some of her lucid compositional strategies through slight shifts in Danielle's location or trajectory, and through the alteration of certain phrases or gestures in order to create more tacit contrast. For example, in a part of the Eurasia section (0:57-2:17), the spatial pathway that Danielle inscribes in the space is considerably larger than our original “to scale” choreography. Although we disagreed on many fundamental ideas related to dance composition, performance, and even the impulse to create art, Beatty’s participation in this process was of tremendous benefit through her emphatic confirmation that many aspects of the work were in conflict with a (her) conception of dance centered around humanistic conceptions of the body, space, and aesthetics that veered towards universalizing the specific and yielded generalizing and monolithic pronouncements about a mythic or archetypal “human nature.”

A public showing was held at the Toronto Dance Theatre in the summer of 2016 and attended by professional dancers, choreographers, dance educators, graduate students, bartenders, film-makers, academics, and children (see Appendix A). Since an original musical compositional had not been acquired yet, the work was set to Monolake’s “Alpenrausch” (2001) and Autechre’s “Drane 2” (1998) in order to establish a general mood and a means to create cohesion for an audience watching a dance work literally comprised of fragments. In written correspondence received after the showing, one viewer remarked that:

Building on both animal movement patterns and physical/geographical locations, you seemed able to create and develop physical material that transformed a research “study” into dance performance. The individual movements and the movement patterns generated were unusual, “authentic”, non-derivative; essentially a “language.” I think your work spoke with a unique physical voice. (Fraser 2016)

Danielle's performance quality was also referred to as "single-mindedly attentive to the task at hand" and her "investment in the research deterred her from bringing any preconceived, personal performance behaviours and interpretation preferences to the work" (Fraser 2016). Another viewer orally conferred her impression of "beautiful bodies with nowhere to move." Oral feedback from the group regarding the music, movement vocabulary, performance quality, and structure was overwhelmingly positive and provided a concrete direction for the finalization of the choreography while generating ideas for future collaborative efforts with other artists for the purpose of obtaining an original musical score and an original costume.

For the finished choreography textile artist Alicia Zwicewicz and sound artist Benjamin Boles were individually contacted and recruited. Both visited the zoo, attended a showing of the work, were given access to a video of the work, were introduced to the general concepts and process that informed the work, and given free reign with regard to their initial creative interpretation of our ideas. Zwicewicz initially wished to incorporate the physical features of many different animals into her design, but eventually chose to invoke an abstracted interpretation of the animal at the zoo that I had the most direct physical contact with—a red tailed black cockatoo. The beautiful bird had landed on me while Danielle and I were in the Australasian aviary, surreptitiously displayed its vibrant and detailed plumage, removed a button from my jacket, and then paced up and down my arm until it was removed by a zoo employee. The finished costume was a hand-painted unitard paired with a short red/orange wig, which concealed Danielle's long brown hair, and, at least momentarily, made Danielle "unrecognizable" (Grosz 2010 [2007]).

Boles chose a different creative approach for his electronic composition and:

focused primarily on shifting textures and percussion arrangements, constructed using found sounds recorded around Toronto. Those samples were then manipulated and processed until they began to vaguely evoke environmental noise and animal sounds, with care taken to avoid any overtly literal references to “natural” soundscapes. Analog synthesis and multiple hardware sequencers were also used to create layered rhythmic arrangements that could move in and out of phase with each other in fluid and unpredictable ways. Rather than arrange the work in a computer, I recorded a series of live electronic performances, manipulating the various elements in real time. I presented an early rough version to Jonathan and had further discussions about how to develop it to fit better with the choreography. We decided to stretch out the melodic theme over a longer duration, in order to give the performer more space to work within. Aspects of the rhythmic ideas were reworked to avoid unintentional references to popular music forms, and many of the sounds were processed further into abstraction. (Boles 2016)

A costumed studio performance of the finished work occurred on May 5, 2017 at Canadian Contemporary Dance Theatre in Toronto (see Appendix A). Approximately 30 people attended the showing and provided feedback and criticism that proved useful with regard to the final theatrical staging of the work. Performed under bright studio lights, audience members stated that they enjoyed the lighting because they were able to focus in on small details and see the dancer in relation to the overall space. One audience member commented that the lighting was similar to some of the lighting at the zoo. This brief observation became significant when the work staged theatrically in 2018.



## ARCHE: DATABASE ANIMALS, ANIMAL DATABASES, AND HYBRID METHODOLOGIES

*The experience of ARCHE was different from ARK from the onset. To build ARK, Jonathan and I visited the Toronto Zoo numerous times together, reinforcing our visual, aural and kinesthetic experience before entering the studio. I visited the Berlin Zoo alone, and only once. In the studio, building ARCHE, we referred to the ARK vocabulary when we encountered an animal present in both zoos. This was necessary both because of limited rehearsal time and my limited capacity to recall each of the 438 animals from my one visit to the Berlin Zoo. In this way, we began to build a database. A database of constructed reflections, manifested as choreographed movement, built upon observing and feeling. Dancing ARCHE is therefore a less singular experience than dancing ARK. My body memory is now deeply layered, composed not only of my one visit to the Berlin Zoo, but also of the numerous visits to the Toronto Zoo, and the ever-more dominant memories of performing both pieces. Interestingly, the heightened experience of performing and the imprint it leaves can make it harder for me to access my 'source' memories. This is different from performing other pieces, where I am almost always getting closer to realizing the work the more I perform it. While dancing ARCHE I am aware of my memories of memories working as an internal database, and of our notated score of both pieces, built upon each other, working as an external database. The experience is unusually intimate and communicable, personal and shareable. As a dancer, it is an extraordinarily unique way of experiencing a piece and working with a choreographer. The authorship of each moment in performance, found and agreed upon by the two of us, becomes uniquely mine, drawn as it is from my increasingly stratified memory bank.*

Danielle Baskerville, 2019

*ARCHE* (arche is “ark” in German) is a 20-minute choreographic work made in collaboration with Danielle Baskerville based on the space and inhabitants of the Berlin Zoologischer Garten (see Appendix B). The decision to create a second work in ‘dialogue’ with a zoological garden was premised primarily on methodological and artistic curiosity that arose due to my perception of *ARK* being a success, a perception that was based on the eerie correspondence between artistic intentions and the critical, affective, informal, and formal

responses received from viewers. Specifically, there was curiosity regarding the potential for *ARK*'s choreographic methodology to be applied to another site; about whether it possessed adaptability and any extended utility as both a creative research and choreographic methodology. There was also curiosity regarding how a work created with the same methodology but focused on a different place would materialize physically in terms of form, tone, and structure. Secondly, there were also questions about the amount of information Danielle could absorb, differentiate, order, and articulate.

The deliberate decision to focus on the Berlin Zoologischer Garten, as opposed to another zoological institution in the world, was made for two primary reasons. The first was practical in nature. Danielle would be visiting Berlin for a dance workshop and I had plans to perform fieldwork at European zoological institutions later in the year. The second, perhaps more important reason, was related to an awareness, developed through dissertation research, of the substantial differences between European and North American zoological institutions, differences partially perceivable by looking at images and watching videos online and more abstractly understood by digesting essays and books produced by historians and scholars. These differences were intrinsically related to different institutions' cultural origins, social values, and complex histories. These differences materialized in their architectural structures, topographies, exhibitionary schematics, and specific collections of animals. These differences, it was intuited, would also materialize within choreography as distinct visually and kinaesthetic impressions perceivable by an audience.

I visited the Berlin Zoologischer in August 2016 and I was instantly fascinated by its intermingling of historical and contemporary architecture, scientific information, art, plants, and animals. Although I had chosen to visit this zoo because of a difference sensed through virtual

means, I was unprepared for its sonorous physical reality. A decidedly contemporary zoo in terms of its animal husbandry practices, conservation efforts, and educational agenda, the Berlin Zoologischer Garten is, like all things, marked by its past, and consequently contrasts sharply with the Toronto Zoo. Whereas the Berlin Zoologischer Garten was founded in 1844, and has maintained aspects of its imperialist structure, the Toronto Zoo was founded in 1974 and was intentionally designed as a globally informed space. Whereas the Toronto Zoo is located on the margins of the city, where suburban Scarborough meets a large national park and accessible mainly by car and city buses, the Berlin Zoologischer Garten is located in the downtown core in an affluent former West German neighborhood called Schöneberg. It is surrounded on all sides by urban culture—tall buildings, canals, the Tiergarten, private residences, walking paths, streets, shops, and businesses, and even has a subway stop that bears its name. Whereas the Toronto Zoo is organized primarily according to a zoogeographical model that attempts to stage geographical environments, the Berlin Zoologischer Garten is organized primarily by taxonomy and attempts to stage particular kinds of animals—although its groupings of animals are not always internally consistent. Whereas the Toronto Zoo is a huge and sprawling place purporting to exhibit 450 animal species in its 287 hectares of land, the Berlin Zoologischer Garten is extremely dense and concentrated and purports to exhibit 1500 separate species in only 35 hectares. Whereas the Toronto Zoo mediates its animal collection by huge signs with large colourful writing aimed primarily at children, the Berlin Zoologischer Garten has predominantly small permanent signs that relate scientific and popular name, diet, geographical range, and often include information about scientific figures who ‘discovered’ or named the species. Whereas the Toronto Zoo’s wide pathways link sections of the zoos fairly modern, originally brutalist, but continually updated architecture, the Berlin Zoologischer Garten is literally a series of

meandering and overlapping pathways set in a landscape of artificial ponds, foot bridges, fountains, abstracted and representational sculptures, and lush ornamental gardens where neoclassical, orientalist, modern, and postmodern structures all exist alongside one another. Walking through this place, it quickly became evident why it was still often called a *zoological garden* rather than a *zoo*. As much as it was a conservational and recreational space, it was also an overtly aestheticized space, a space that I perceived as inscribed by an aesthetic vision that imagined science, informed leisure, and art as thoroughly complementary and interpenetrating pursuits.

The ensuing creative process with Danielle was an apprenticeship to the reality that methodologies, whether artistic or academic, are, at their best, idealizations generated in relation to a particular subjective experience, and, when applied to any other experience, are, and should be, significantly affected by the reality of that experience's subjective particulars. Prior to working in the studio, our cooperative process of creating *ARCHE* was imagined as a relatively simple and straightforward re-iteration of the process utilized to create *ARK* underpinned by the assumption that a methodology created in extended dialogue with a space could be exported for use at a different site. However, as a result of our divergent experiences, this was not the case. Working on *ARK*, Danielle and I visited the Toronto Zoo together on multiple occasions and were able to develop a shared understanding of a place and the animal inhabitants of that place. Consequently, we were able to work together in an effective, affective, responsive, and articulate fashion. In contrast, our research visits to the Berlin Zoologischer Garten were solitary experiences, separated in time and space and unfolding during different seasons marked by significantly different weather, lighting, and animal viewing conditions. Danielle's wintery experience was marked by her viewing most of the animals in their indoor enclosures, whereas



during my summer experience I had viewed animals primarily in their outdoor exhibits. Danielle had entered through the south gate of the zoo and then wandered through the space according to her desire, whereas I had entered through the west gate, plotted my course according to the map's schematics and attempted to chart a route that wouldn't result in backtracking (in order to avoid any repetition of animal choreography in the finished work). Danielle had considered the zoo and the aquarium connected to the zoo grounds as quite separate institutions, and had, quite rationally, only visited the zoo grounds, whereas I had considered them both as part of the same institution despite their different names.

Meeting to discuss creating the work, we shared our different embodied experiences and our discordant recollections. Our dialogue resulted in our shared recognition that we did not have a shared recognition to work from. Although we had both visited the Berlin Zoologischer Garten we had not experienced the same space. Obviously, our teleological plan for leveraging our existing methodology had some major ontological and epistemological problems. Our methodology, predicated on correspondence with each other and our environment and the dialogic fashioning of a choreographic embodiment of a shared somatic experience of the human and nonhuman choreographies of the Berlin Zoologischer Garten was fundamentally flawed—despite the best laid plans of mice and men. The errors were mine, and I exaggerate greatly when I say “best laid plans” for I had neglected to think about many things that could have aligned our experiences even though we attended the zoo as separate times. Notably, I had failed to coordinate our routes, failed to notice that the zoo had two entrances, failed to stipulate what exactly constituted the zoo area, and failed to inquire about what route Danielle took, even though she had visited months before me. Although I had chosen to work with the space of the Berlin Zoologischer Garten exactly because of my abstract understanding that it was a different

place, the Toronto Zoo, with its one entrance, fairly simple trails, and contained grounds, exercised a considerable pull on my envisioning of our future experiences.

The practical implications of this situation might have merited abandoning this choreographic experiment altogether but instead of doing this we discussed ways that we might integrate aspects of our divergent experiences into the new work and adapt aspects of our existing methodology to meet a new reality. We pragmatically took stock of what creative resource materials we possessed. We had:

1. Two sets of distinct embodied memories of the Berlin Zoologischer Garten and the animals that resided there.
2. Maps of the place produced by the Berlin Zoologischer Garten, and,
3. Photographs that I had taken of every exhibit in the order I had seen them.

While these things were not insubstantial, they could only be likened to a crude scaffolding, a provisional structure that that could, at best, only delineate a rudimentary form. We determined these materials, by themselves, were unlikely to yield a work of the same *nature* as ARK. But what about a work of a different *nature*? Furtively searching for a possible creative trajectory, I remembered the momentum generated by Lingis's "Animal Body Inhuman Face" (1997) and the effect it had on the creation of ARK though its uncanny orientation of Danielle and I towards an initially nebulous creative endeavour. Optimistically, I shared some of the ideas that I had assimilated over the course of my dissertation research. I mentioned Keekok Lee's conceptualization of artefactual nature, developed in *Zoos: A Philosophical Tour* (2005). According to Lee's ontological examination, contemporary zoos did not exhibit real "wild" animals but rather a special type of domesticated animal fashioned by the cultural subversion of a nonhuman natural selection and enacted through zoological breeding programs and the

“hotelification” (Lee 49) of animal existence. The resulting “immurated” (4) species were not the product of natural forces, animal subjectivity or aesthetics, or nonhuman engagement with a shifting environment. According to Lee, these species were products of human culture—beings engineered according to human aesthetics, human knowledge, and human sense and sensibility. I also shared ideas from Irus Braverman’s *Zooland: The Institution of Captivity* (2013). One of the focuses of Braverman’s detailed study of institutional structure of the zoo was the various animal databases developed between national, continental, and global zoological organizations such as CAZA, AAZA, and WAZA,<sup>68</sup> which, whether they were created in the service of breeding programs, animal husbandry, or for managerial realities, rendered living animal bodies into human “data.” We realized that as much as *ARK* was a choreography about animals zoomorphically affecting human bodies and human movement, it was also a choreography about reducing animals to what we had “sensed” about them and, therefore, *ARK* and the score that had informed it, absolutely rendered animal bodies into human “artefacts” and human “data.”

Making an intuitive leap, I recalled a media studies text written by Japanese scholar Hiroki Azuma entitled *Otaku: Japan’s Database Monsters* (2009), a work that integrates a cultural interpretation of ‘animality’ with an analysis of the deployment of cultural databases. *Otaku* is a brief, yet incredibly erudite, examination of the conditions and cultural products of a maturing postmodernity camouflaged as a case study of a group from Japanese society known as otaku.<sup>69</sup> According to Azuma, otaku, are “database animals” and organize themselves around new media forms with hybrid content (primarily anime, manga, and videogames), perform new social configurations, and enact forms of meaning-making that are considered regressive and juvenile by quotidian members of Japanese society.<sup>70</sup> Azuma’s study examines the shift within otaku culture from a state of cultural snobbery to animality—a state where desire circulates

without the other. This shift manifests in the consumption and production of new cultural products and forms of sociality that dispose of grand-narratives and philosophies of transcendence and demonstrate arborescent structures. These no-longer deemed essential cultural “artifacts” are summarily replaced by the otaku with cultural objects and social relations that emerge from “database” like deep-structures in which singular *moe* elements (distinct and separable visual, stylistic, and narrative components) are able to be extracted and recombined for the purpose of elucidating specific affective responses of temporary utility. Through an examination of a variety of media objects including web-pages, video games,<sup>71</sup> and anime,<sup>72</sup> and sociological studies focusing on “traditional” culture and contemporary otaku, Azuma examines how the structure of otaku aesthetics, functional objects, and social lives resemble each other and are dissimilar from pre-existing historical objects and existing forms of sociability. Azuma asserts ominously that the “harsh reality that we have decisively lost any traditional identity—lies beneath the existence of otaku culture” and that those “who reject the imaginary of otaku as ‘horrifying’ have in fact subconsciously reached this realization” (15).

I meditated on all the different zoos that I had visited over the course of my research. At the Toronto Zoo, the lions are choreographed into an area that stages a savannah game reserve under the sway of a subtle, yet visible *The Lion King* (Roger Allers and Rob Minkoff 1994) Disney-fication. At the San Diego Zoo, the lions are choreographed into an area that stages the Pleistocene era in California and a living species serves as a stand-in for a now extinct feline species that lived in the San Diego area 15,000 years ago. At the Berlin Zoo, the lions were choreographed into a *Rabtierhaus*, or “Predator house”, a taxonomic archive cast in cement, metal, ceramic tiling, and living flesh dedicated to the concept of the zoological Order Carnivora. At the Berlin Tierpark, the lions were choreographed into an area that resembled an operatic set

piece from the mid twentieth-century. Images and videos of zoos online offered even more zoological visions, as did two iterations of a video game called *Zoo Tycoon* (Frontier Developments 2013, 2017) in which digital iterations of actual species of animals, each with their own specific choreographic signatures, are organized by a player in order to creatively shape and maintain their own zoological institutions. Considered collectively, these real and virtual zoos, regardless of their form, were never embodying a “transcendent” understanding of life, never espousing a “real” grand narrative of life, but rather, just rendering historically-situated, temporary narratives that were dependent on existing constellations of imagined communities, mediated fantasies, and valorizations of particular kinds of knowledge and relations. Were zoos just comprised of transposable iterations of culturally packaged bodies of meaning fashioned, and refashioned in response to temporary affective constellations? Was the contemporary “horror” about the existence of the zoo more accurately identified as the realization that “nature” had “decisively lost any traditional identity”? Were animals at zoos just distinct and separable visual, stylistic, and narrative components able to be extracted and recombined for the purpose of elucidating specific affective responses of temporary utility? Was a lion just a moe element inserted into temporary zoological narratives? Were zoos just collections of living moe elements?

Reflecting on these questions, questions that complicated, and even compromised, the definitively more generous, and even radical, zoomorphic ethos informing *ARK*, I realized that although we did not have the material to create a rigorous kinaesthetic embodiment of a shared experiential encounter with the Berlin Zoologischer Garten, we did have the means to create a choreographic work that could represent the Berlin Zoologischer Garten as a specific iteration of an animal database comprised of animal moe elements. Working with this subversive premise, in

addition to our memories, photographs, and maps, we also had 360 animal moe elements—our 360 previous kinaesthetic reflections from the Toronto Zoo. Significantly, since we had obviously abandoned the idea of kinaesthetically embodying the “real” animals that had been in front of us, we could now freely access thousands of videos on YouTube featuring animals at the Berlin Zoologischer Garten in order to create additional moe elements. And, if that site failed to deliver moving bodies, we could access a “virtual zoo” called *Wildscreen Arkive*—an immense online database of animal videos and images organized according to species.<sup>73</sup> Again, we discussed the “rules” of our creative engagement that we would rigorously apply to the composition in order to embed aspects of our critical observations within the work. Previous rules established for *ARK* would be *modified* in conjunction with our new resources. These new rules were:

1. We would *imagine* a route as a means to determine the general spatial composition of the dance work. The route would begin at the entrance that I entered the zoo and terminate at the location where Danielle had exited. The route would still reference every species present.
2. We would conceptualize the zoo as a specific manifestation comprised of individual, extractable, moe elements from an animal database.
3. We would re-animate any relevant existing choreographic phrases from *ARK* and transform these singular embodied impressions into a new phrase that was now representative of an entire species, just as the animals at the zoo often represent natural species. The singular rhino we enacted in *ARK*, would now become a moe element that was equitable to a general rhino. The sensorial relation that Danielle had developed in dialogue with one particular rhino, would now be viewed as a relation

- between her and every rhino. Alternatively, if a species or breed of animal was present at the Berlin Zoologischer Garten that had not been present at the Toronto Zoo, we would creatively and kinaesthetically engage with *media* featuring that species or breed of animal as exhibited in Berlin in order to produce more moe elements. However, regardless of whether we were focusing on a video of an individual, or a video of a collective, we still would stress being creatively present and attuned to the animal bodies present in the video in front of us in order to generate our “data”.
4. We would choreographically enact each moe element in relation to the real Berlin Zoologischer Garten topography that we had experienced differently. More simply put, we would reference each moe element in the order it *might or should* have appeared at the zoo. We would re-assemble the order of moe elements using the map of the zoo in conjunction with a virtual route, the notes I recorded, and the photographs I captured.
  5. We would generate detailed movements and kinaesthetic visualizations that emerged from our observation and kinesthetic dialogue with digitally mediated animal bodies, animal movements, animal rhythms, and relations between animals without the need for any specific animal to be recognized by a viewer as such. Our specific sensory experience of these mediated animals would be prioritized over the replication of persistent cultural tropes about specific species or the mimetic replication of real bodies.
  6. We would not aim to create a perfect correspondence between the size of animals as imagined or experienced on a screen and the size of movements that referenced them

or strive for a perfect correspondence between an animal body and anatomically analogous parts of our bodies. We would instead focus on how the digitally mediated animal body affected us, encouraged us to think about our bodies, or prompted us to imagine our movement differently. Again, we would not demonstrate an anthropomorphic or cultural preference for one animal over another predicated on our abilities, skills, or personal histories. Thus, we would assume all animals were charismatic “data.”

7. We would attend to the specifics of the animal bodies and movements that we observed on the digital videos in order to create each moe element. We would avoid the temptation to anthropomorphically alter animal kinetics or animal forms so that movement became grandiose, spectacular, symmetric, geometric, diagrammatic, whole, or “beautiful” in terms of conventional the Western dance aesthetics that informed both of our dance backgrounds. We would be conscious about our use of videos and recognize that we could not avoid the effects and affects of video, such as the flattening of three-dimensional objects produced by screens and the spatial and temporal shifts produced by different video editing techniques and lenses, and so we would allow these things to influence our movement. Although transformed into “cyborgs,” animals would still, with any luck, “take us by that hand” (Marchesini 2017 97) so that we could “become unrecognizable” (Grosz 2010 [2007]). The dance would be a procession of sensorially attuned moe elements generated from encounters with digitally mediated animals *not* a procession of real animals. While perhaps we could not have epiphanies of the same magnitude, we still hoped for more than silicon dreams.



8. We would attempt to keep each moe element distinct and separate through the evocation of specific qualitative differences to reference the real divisions present at the Berlin Zoologischer Garten and the real difference between species.



Figure 35: Berlin Zoologischer Garten Map. Berlin Zoologischer Garten, 2018.

After these new “rules” were finalized, I looked at the Berlin Zoologischer Garten visitor map (see figure 35 above) and attempted to establish a route to “follow” that aligned, in a rudimentary way, with the classificatory system of the zoo, and did not require Danielle to backtrack and consequently, to repeat moe elements. I then referred to my photographs to establish the exact order in which species would have been “encountered” along this route. When necessary, I translated German animal names into English. Painstakingly, I started to generate a

comprehensive document that would eventually become the organizational schematic, the textual assemblage of an assemblage of assemblages of assemblages, the choreographic score, the database of animal moe elements. After more labour than was initially expected, the score was “finalized” and contained 441 individual moe elements, each one representing one kind (either species or breed) of mammal or bird present at the Berlin Zoologischer Garten. This number was considerably lower than the 1500 species of animals that the zoo boasted of holding. I realized that the remainder of the species were located in the aquarium (that housed insects, invertebrates, fish, amphibians, and reptiles). I emailed the Berlin Aquarium, explained my project, and requested a list of the animal species that they exhibited. They replied that they were unable to fulfill this request. I looked at my photographs and notes and realized that while they were comprehensive to a certain extent, they did not let me figure out the order of the animals, nor their relationship to one another, or in some cases—especially in areas that didn’t permit flash photography—permit me to identify species names or discern the identity of exact species. Another friend told me she was visiting Berlin in the near future and asked if I wanted her to video the aquarium. I explained what I was doing to and the sort of visual material I needed. Eventually, she sent me a video that enabled me to see the architectural space of the aquarium, but due to lighting conditions, again, did not let me identify individual species. Remembering that Danielle had not even visited the aquarium, and recognizing that although they were joined together, the aquarium and the zoo were semi-autonomous institutions, I decided to let the zoo, as Danielle understood it, be the zoo. Although she was remarkably (and uncharacteristically) silent about this decision, I think she was relieved.

With the database structure completed we could begin to fill the *ARCHE* score with kinetic moe elements. However, before beginning, I showed Danielle the map of the zoo,

explained the virtual route, and the contents of the finished score and asked if it made sense to her. Again, our first action once in the studio, in January of 2017, was to “walk the space of the zoo” in the space of the studio and decide where the choreography would begin, unfold, and end. Although the route was much more complicated than the route referenced in *ARK*, through repeated reference to the zoo map and discussions about its natureculture landscape, we transferred aspects of the zoo topography onto the studio floor, gradually gaining a sense of where things might exist in relation to each other within the frame of the studio space. We decided that the stage right center of the space would be the entrance, and the downstage center would be the exit and organized the spatial relations of the other areas accordingly. With our rudimentary mapping of the space complete we began to extract phrases from *ARK* and generate choreographic moe elements from digital media of the animals. In comparison to *ARK*, whether a result of becoming more familiar with “thinking zoomorphically” or a result of the work’s focus on animals captured on digital video, choreographic phrases created for *ARK* were, in general, much simpler and focused on animal’s trajectories, forms, or actions, rather than on complex sensations. On one hand, this allowed choreographic phrases (moe elements) to be generated more quickly, and with less deliberation. On the other hand, this prevented choreographic phrases (moe elements) from always being easily distinguished from one another and, consequently, the unintentional blending of the vocabulary arose as a new hazard to be conscious of. Nevertheless, work in the studio proceeded linearly, and the choreographic composition was again, slowly created over a period of months, working without music, one animal or group of animals at a time. Although the Berlin Zoologischer Garten’s basic structure was organized in a taxonomic fashion, this was not *always* the case, and our sections often had a number of kinds of different animal species within them. When a section was completed, we assigned it a title and

video recorded it. When we returned to the studio, unlike our process with *ARK*, we would not revisit all the completed sections and instead we began where we had left off and created new material until the next section was finished. This process continued until we had completed creating all the choreographic moe elements that comprised the piece.

When this part of the process was completed in February of 2018, we began to assemble the different assemblages of the work together by referring to our collection of moe elements in tandem with the short videos that we had recorded of each section. Unlike *ARK*, *ARCHE* was not created in dialogue with an outside eye, nor was it shown to any studio audiences before its theatrical performances. This was a deliberate choice, as I was not interested in altering the composition or having Danielle's performance critiqued or exposed to the dramaturgical vision of another artist. During the creation process, I focused on learning the external features of the moe elements so that I would recognize each of them as distinct and would notice when they were being blended or enacted in the "wrong" order during rehearsals or performances. In chronological order our sections were: Monkeytown (36 Species), Birdlake (18 species), Antelope-ish (8 Species), Chicken Little (14 Breeds), Alpine Rhinos (35 Species), Shorebirds (31 Species), Pheasant House (67 Species), Birdhaus (77 Species), Raptor Dream (21 Species), Pig Pen (5 Species), Bear Den (6 Species), Water Babies (8 Species), The Aviary (9 Species), The Cows (10 Species), Dear Deers (13 Species), Mighty Ducks (13 Species,) Horny Rhino (5 Species), Over the Bridge (25 Species), Red Meat (11 Species), Night Crawlers (18 Species), and Whiskers (4 Species). A complete list of all animal moe elements in the order they are referenced in *ARCHE* is available through accessing the choreographic score (see Appendix B). All animals are listed with specific choreographic notes created during the working period, and alongside the

online videos that were used to create them. Moe elements that were generated by re-using existing choreographic material from *ARK* are indicated as such.

For the finished choreography, textile artist Alicia Zwicewicz and sound artist Benjamin Boles were again asked to contribute to the work. Both were shown photographs of the Berlin Zoologischer Garten, given access to the separate videos of the work, introduced to the general concepts and process that informed the work, and given free reign with regard to their initial creative interpretation of our ideas. Zwicewicz's creation was a complex and detailed symmetrically patterned unitard stitched together from various pieces of different iridescent materials and paired with a long blonde wig, which again concealed Danielle's brown hair. The costume built on the science fiction theme established in the first work, utilized a colder and darker colour schematic, which evoked the plumage a bird species called a Waldrapp (Northern bald ibis) and playfully referenced stereotypes of Nordic beauty as well as the conventional attire of particular Berlin sex workers in the Mitte neighbourhood of Berlin. Simultaneously it encouraged a "creaturely" form to be evoked when parts of Danielle's body were obscured by the long wig. Correspondingly, Boles approached his electronic composition differently as well, and his process was informed by his short participation at the beginning of the creation process in the studio. Focusing on the interplay of melodic elements rather than rhythm, Boles reinterpreted his original sound sources and positioned them as decorative elements on top of a new extended recording of sounds from his backyard. The result was a sonorous, textural, eerily meandering, and gradually developing "weird" soundscape that evoked elements of the Berlin Zoologischer Garten that I had identified as being in opposition to the Toronto Zoo's more commercial design. The soundscape and costume were completed in late February of 2018, just over a week before the theatrical showing, and both significantly influenced performative aspects

of the work in significant ways. The skin-tight and sometimes sparkling costume allowed minute movements to be seen and the long wig responded kinetically in both minute and dramatic ways to any movement. The wig, ironically also had a tendency to interfere with certain movements and often almost entirely obscured Danielle's face. Rather than change the work to avoid these moments, as might have been done under Beatty's tutelage, we accepted them and intuited them as analogous to moments of the zoo experience when the animal doesn't acknowledge the viewer or position itself in an ideal spot, angle, or position for viewing. With regard to the soundscape that Boles created, Danielle was encouraged to respond and begin to structure, not the execution, but the duration of some of the moe elements in relation to its melodies and rhythms, at times when she deemed it appropriate.

*ARCHE*, is in many respects, is a gateway leading into a different sort of experiment than *ARK*, as its gestures towards two interesting possibilities, both impossible to explore at the present moment, but related to our construction of a database comprised of moe elements that represent particular species. The first possibility is that other choreographies could be created based on zoo content and structure without our visiting them—provided that were provided with a map and given a specific sequence of animals. The second, more interesting possibility, is that, provided the database was expanded to include more animal species, another person could be granted access to it and could personally arrange the individual moe elements (listed without species attributions) according to the qualitative similarities and differences that they perceived. This would create a choreographic work that could, in turn, become the organizational schematic for an actual zoo that ordered animals, not by taxonomy, habitat, or geographical location, but according the perception of our kinaesthetically inflected perception of them.

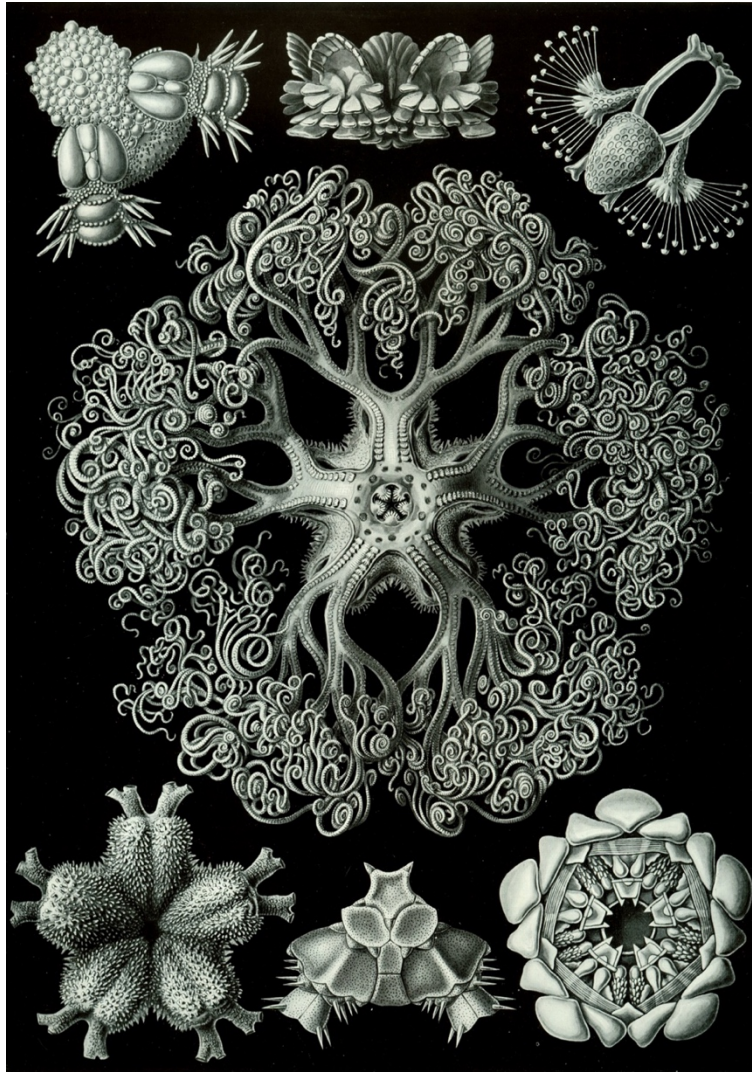
### **BIOTIC: 3 DANCES FROM LIFE**

Theatrical performances of both works (See Appendix A and Appendix B) occurred on March 8<sup>th</sup>, 9<sup>th</sup>, and 10<sup>th</sup>, 2018 at the Winchester Street Theatre as part of an Ontario Arts Council and Toronto Arts Council funded show titled “Biotic: Three Dances from Life.” *ARK* and *ARCHE* were performed alongside a work entitled *Transitional Object* (2018), choreographed and performed by Toronto-based dance artist Bee Pallomina. Promotional posters and postcards for the show were created by Carmen Victor and sourced from the work “Ophiodea” (see figure 36 below), plate 70 from German zoologist, naturalist, philosopher, physician, and artist Ernst Haeckel’s work *Kunstformen der Natur* (1904)—also known as *Art Forms in Nature*. Notes in the program were limited to a brief statement about the works’ relationship to the space and inhabitants of the Toronto Zoo and Berlin Zoologischer Garten and the following, previously featured quote extracted from Alphonso Lingis’s “Animal Body Inhuman Face”:

Our bodies are coral reefs teeming with polyps, sponges, gorgonians, and free-swimming macrophages continually stirred by monsoon climates of moist air, blood, and bile. Movements do not get launched by an agent against masses of inertia; we move in an environment of air currents, rustling trees, and animate bodies. Our movements are stirred by the coursing of blood, the pulse of the wind, the reedy rhythms of the cicadas in the autumn trees, the whirl of passing cars, the bounding of squirrels and the tense, poised pause of deer. (1997 114)

The minimal use of theatrical lighting within Scarlett Larry’s lighting design, the absence of set pieces, and the lack of spatial decorations all allow viewers to focus on the “real” bodies and the “real” space the dance continuously refers to, while evoking aspects of the lighting conditions of zoo collections and the sensorial barrenness that may be present in many animal enclosures. The

online videos that accompany this dissertation (Appendix A and B) are records of the initial choreography of *ARK* created in 2016, the studio showing of *ARK* in early 2017, and the theatrical performances of both works in 2018. While there are significant differences between the videos, watching them in chronological order allows aspects of the aforementioned creative processes to be visualized.



**Figure 36: "Ophiodea", plate 70, from Ernst Haeckel's work *Kunstformen der Natur* (1904). Public domain (Wikimedia Commons).**

The theatrical show was attended by Fabien Maltais-Bayda, a Canadian dance and performance critic representing the art journal ESSE. His observations resonate with many of the



theoretical ideas that inform the choreographies and contextualize the works in relations to American modern/postmodern dance and contemporary cinema:

In Osborn's choreography, the moving body is imagined as an inchoate assemblage. The program notes detail that the first work, *Ark*, embodies 360 distinct animal species, while the last work, *Arche*, embodies 488. Held together in roughly half-hour solo works, these amassed life forms are inevitably realized as fragments: a momentary unfolding of arms, a shiver that traverses the skin.

The body that Osborn and Baskerville create, buzzing with bits from so many others, calls to mind the monstrous body that philosopher José Gil observes in Merce Cunningham's choreography. Here, a dancer must move through multiple isolations, contradictory postures, and impossible transitions. "One could even say that to each of the simultaneously held positions made up of heterogeneous gestures there corresponds a different body," Gil suggests. The result is a virtual body in performance. This is not to say an "inorganic" body, as Gil is careful to note, but rather one that contains all the virtually imagined movements and pathways of so many organic bodies within a single, monstrous, entity. Yet, where Cunningham's monstrousness emerges from formal intervention into dance's codes, the multitudinous embodiment of Osborn and Baskerville erupts from their plunge into the gestural and sensual terrain of interspecies entanglement.

Something striking here is how formal, even unnatural, the work appears, while still engaging with what we often consider to be elements of our natural world. Baskerville's striking bodysuits, made by Alicia Zwicewicz, are almost sci-fi in their shimmering allure, while her wig-switch between the first and second works might conjure the many-tressed Tilda Swinton playing a trio of blonde, brunette, and redheaded clones in Lynn Hershman Leeson's film *Teknolust* (2004).

Of course, Osborn's de-naturing of the natural is fitting, given that the animals his choreography addresses inhabit zoos: the Toronto Zoo for *Ark*, the Berlin one for *Arche*. What's more, this aesthetic treatment might trouble divisions between the natural and unnatural, the human and non-human—binaries that are, as so much scholarship shows, our own imagined constructions.

We can see all this in the dancer's body, too. Baskerville moves deftly, with a precision equal parts measured and mellifluous. Even as she cycles through hundreds of amalgamated animacies, Baskerville displays virtuosic command, her very human artfulness and dexterity always remaining impressively visible. In Osborn and Baskerville's choreographic project, then, the work of embodying many sundry species manages to coincide with the performance of a body that is not only single, but also singular in its virtuosity. (Maltais-Bayda 2018)

## POSTSCRIPT TO *ARK AND ARCHE*

The animal bodies at the zoo invariably become subjected to human choreographies, but human trainers, architects, designers, caretakers, and audiences also become subjected to and affected by animal choreographies. Despite its prescriptive and theatrical staging that organizes, frames, and contains animal bodies, the animal bodies at the zoo, as David Hulka (2010) also observed, are neither wholly subservient to human design or mere reflections of our cultural imagination; unlike objects at a museum, the bodies at the zoo can and do resist our constructions, desires, schedules, and expectations. The slumbering body, the semi-concealed body, the reticent body, and the seemingly despondent body hold as much information about our supposed understanding of the natural world as the gregariously active body. After witnessing, and somatically reflecting, on the staggering multitude of bodies present at the Toronto Zoo and Berlin Zoologischer Garten, I sometimes suspect that zoo detractors are most offended by the continual display of human *failure* the zoo embodies—a vivid challenge to the conceit of humanist progress and reminder of the limits of our understanding about other beings and perhaps validation of the traditional adage “out of sight, out of mind.” The hyperactive animals of documentary films can be edited by our devices and directed according to our narratives, and the virtual animals of animation can be programmed to suit our fancy, but our urban menageries often denude our epic visions with a less spectacular kinetic candour.

The denuding of a nostalgic utopian vision of the world—an iteration of the “peaceable kingdom”—where animals and humans can coexist peacefully and independently might be painful to contemplate but seems more appropriately tuned to the reality of an era designated the Anthropocene. This does not necessarily mean the dream of

a future human-animal utopia needs to be abandoned, but rather that a particular conceptualization of how it could and should manifest itself needs to be discarded in response to the almost inevitable prospects of an “artefactual” (Lee 2005) planet overlaid by human designs. To look at the space of the zoo without wonder and see only multiplied instances of homogenous relations with animals requires a special kind of blindness. There is gross evidence of the exact opposite in terms of the enactment of different designed spaces and regimens that are testament to the developing awareness (evident throughout contemporary animal scholarship) of the living animal as an individual with certain desires and preferences belonging to a species with specific histories and proclivities. The observation that animals are specifically ill-suited for life in captivity is beyond asinine in a world increasingly ill-suited for anything specific and where it seems more prudent to speak of degrees of captivity rather than the romantic fantasy of a wild nature.

In *Staging Tourism: Bodies on Display from Waikiki to Sea World* (1999), Jane C. Desmond refers to the zoological garden as a site that offers the opportunity for visitors to “consume radical body difference” (146). Her detailed study of the performative aspects of zoos and their deliberate staging of animal bodies offers an astute glimpse into the historical and contemporary manufacture of digestible visions of animals for capitalist consumers. In the introduction to Part Two of the work, Desmond qualifies her use of the word “consumption” and explains that its use signifies more than just ties to a market system through the implication of “a physicality and a merging” (146). As a choreographer, and researcher, I am intrigued by the opportunity for our somatic experiences of phenomena—our embodied “consumption” of the things both living and digitized—to be conceptualized, regardless of its context, differently. The ingestion, absorption,

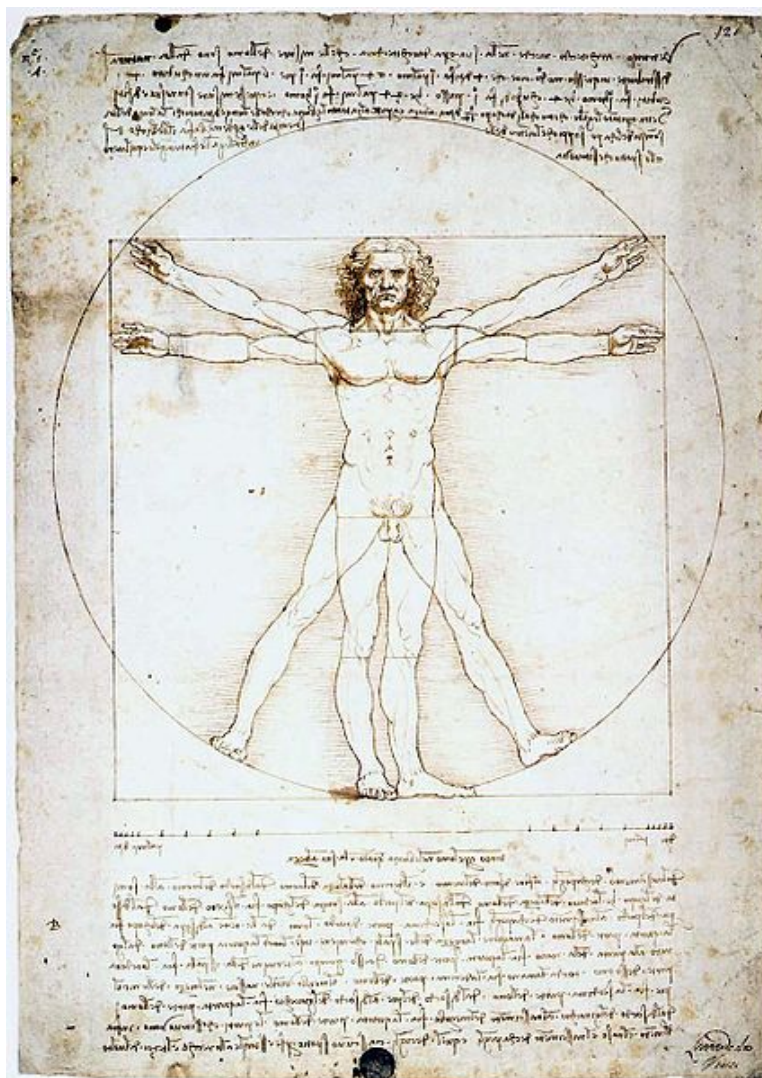
assimilation, and production of new material offers the chance to become intimate with things from beyond our specific physical or social bodies and to literally begin the process of constituting new and different bodies. Is it possible to imagine that the kinaesthetic relations present at zoos create conditions that also propel understanding through the embodied recognition and subsequent negotiation of “radical body difference” (146)? If so, the lessons learned from zoological ‘failures’ and ‘successes’, and even real and virtual zoological encounters, are invaluable to human and nonhuman bodies moving in future multispecies choreographies.

## CHAPTER 4

### A BESTIARY OF MOVEMENT MEDITATIONS TO DECENTER VITRUVIAN MAN

*The real reality is something we create every moment of every day, that realities spin off from our decisions in every second we've alive.*

Jeff VanderMeer, *Borne* (2017)



**Figure 37: Vitruvian Man, Leonardo da Vinci c. 1490. Public Domain (Wikimedia Commons).**

When I was training regularly in various modern dance forms,<sup>74</sup> and even while taking ballet classes, different instructors would reference Leonardo da Vinci's iconic work *L'Uomo Vitruviano* (circa 1490), or *Vitruvian man*, as an emblem of an ideal human form. Whole, erect, symmetrical, with arms and legs simultaneously spanning the geometries of both the square and the circle—the human body stood solitary, extracted from the world, yet positioned at the center of the universe. In *Over the Human: Post-humanism and the Concept of Animal Epiphany* (2017), Roberto Marchesini contrasts the humanist “Vitruvian model” of man with the post-humanist “cyborg”:

1. the former places itself at the centre, it is centripetal; the latter focuses on the margins, avoiding any definition of centre, it is present in its connecting structures;
2. the former enhances its being an essence, therefore its purity, the latter is based on a principle of contamination, on its being a hybrid;
3. the former replicates itself in the world, it is anthropoplastic; the latter hosts the world, its boundaries are hospitable thresholds;
4. the former considers technology as an instrument of domination, it transforms the world into a laden table; the latter believes it to be a medium to connect to reality understood as a partner;
5. the former regards itself as a technical manufacturer, the Promethean human forging the world; the latter considers itself as a product of technology, Epimetheus's human son;
6. the former believes to be self-sufficient, autopoietic, and thinkable *juxta propria principia*; the latter believes to result from the encounter with otherness and to be unthinkable through an internal analysis. (146)

The following text, inspired in part by Borges's *The Book of Imaginary Beings* (1970), is a feral bestiary of body-focused mediation exercises intended to counteract the inscribed effects and affects of an idealized “Vitruvian” kinetic bodily logos. It is a multiplicity of embodied tactics intended to bamboozle, bewilder, blur, complicate, compromise, decenter, dissimulate, dissolve, discombobulate, dismantle, disintegrate,

disorder, entangle, flummox, fracture, fragment, garble, glamour, jumble, muddle, mystify, obfuscate, perplex, puzzle, scramble, undermine, upend, and vex a dancing or moving body that conceptualizes itself, and desires to be conceptualized by others, as whole, pure, autopoietic, autonomous, symmetric, and centered. Rather than being emblematic of one particular technique's holistic vision of the body or imagined as hierarchically arranged exercises contributing to a specific system for unifying thought and movement, these meditations are singularities, interventions, epiphanies, de-creations, animal-becomings, or lines of flight that can become embodied in any order. They ask the animal body who contemplates their contents to begin a dialogue between their own contents and the contents of foreign bodies in order to reflect on, reconceptualize, and reanimate their own embodied perception of forms, structures, surfaces, boundaries, rhythms, connections, and dynamics, and in so doing, restructure and rearticulate a unique and subjective habitus by becoming a habitat for otherness. Organized alphabetically, with one entry for each letter of the alphabet, this bestial litany asks a reader to engage kinaesthetically with different nonhuman forms—insects, spiders, cephalopods, fish, amphibians, reptiles, birds, and mammals. Unlike the ideokinetic exercises articulated by somatic pioneers Mabel Todd (1972 [1937]) and Lulu Swiegard (1978 [1974]), there is no ideal response to these mediations beyond the bodily confusion, dis-orientation, and sense of wonder that can emanate from encounters with Otherness.

# A

## **ANCHOVIES**

**KINGDOM: Animalia**

**PHYLUM: Chordata**

**CLASS: Actinopterygii**

**ORDER: Clupeiformes**

**FAMILY: Engraulidae**

Anchovies are small marine fish that aggregate in large schools comprised of hundreds or thousands of individuals. When threatened by predators, anchovies may abandon their usually coordinated schooling strategies and swarm into a compact spherical formation. This formation is created by the action of individual fish attempting to get away from an exterior “surface” and hide in the “interior” space. The symmetrical spherical shape of the bait ball is created because this is a shape that minimizes the surface area in relation to overall volume, and thus the fewest number of fish are on the exterior of the ball at any given moment.

### **DISTRIBUTING DENSITY**

Imagine that your body is an ocean teeming with hundreds of small shimmering fish swimming alongside and around one another. Together they form a school of fish and together they are moving through the space that is your body in a coordinated, distributed, and equally-spaced fashion. As these glittering fish maneuver, they always manage to keep a certain amount of space between them at all times. How close together are the fish in the schools inside of you? How are they grouped together? What is their velocity? Their collective trajectory? At certain points or places within the body of water that you are, the fish encounter different predators. When they encounter these predators, they begin to change the way they maneuver through you. Let the school of fish swim more quickly, change direction more often, and move closer together. Feel small areas inside of you become dense as the school of fish begins to lose its cohesion and coalesces into a tightly packed ball. As the spaces between the fish vanish, imagine their deliberate whirling around a specific area as each fish that comprises the school attempts to plunge into the center of that spot. Although this space is dense, it is not rigid. It is constantly modulating and wobbles slightly within you. Spend time sensing this modulating and wobbling sphere. Feeling the distinct difference between the dynamics of the school and the dynamics of the sphere. When you can feel it clearly release it and let the school of fish reorganize, distribute themselves evenly, and resume their journey through you. Let the school form new balls in response to other predators that may lie beneath your otherwise calm surface.



# B

## **BASKING SHARK**

**KINGDOM:** Animalia

**PHYLUM:** Chordata

**CLASS:** Chondrichthyes

**ORDER:** Lamniformes

**FAMILY:** Cetorhinidae

**GENUS:** *Cetorhinus*

**SPECIES:** *C. maximus*

The basking shark is the second-largest existing species of shark and is found in temperate oceans around the world. Huge and slow moving, the basking shark subsists wholly on a diet of zooplankton, small fish, and invertebrates filtered from the water. As a “ram filter” feeder, the basking shark must open its mouth and swim forward in order to push water and the food suspended in that water into its mouth. As an “obligate ram ventilator” the whale shark is required to continually move in order to extract oxygen from the water that passes over its gill membranes. Both eating and breathing require slow, yet incessant motion.

### **FILTERING SPACE**

Imagine that your body is, or parts of your body are, suspended in a matrix in which slow constant movement is necessary in order for you to breathe. The matrix that you are moving in also has tiny concentrations of food of different types in different densities at different depths. You discover this food, which might resemble the dust you can see in the air in certain lights, while moving through the matrix. Move around the space you and your body parts are in, continually extracting oxygen and filtering food from the space around you. Focus on a specific area of your choice. Imagine opening this area wide. Imagine the space you are in passing into you, and then out of you, and leaving behind energy and oxygen, the things that fuel your slow movement in search of them.

# C

## **CHIROPTERA**

**KINGDOM: Animalia**

**PHYLUM: Chordata**

**CLASS: Mammalia**

**ORDER: Chiroptera**

“Chiroptera” is Greek for “hand-wing.” Bats are winged mammals whose forelimbs have been adapted for flight. Bat wings are comprised of a membrane made out of skin called a patagium. The patagium that forms the surface of a bat’s wings is an extension of the skin of the abdomen and extends to the tip of each digit that are part of a bat’s “hand.” There are four distinct parts of the patagium. The *propatagium* stretches from the neck to the first digit; the *dactylopatagium* is found within the digits; the *plagiopatagium* reaches between the last digit and the hindlimbs; and, the *uropatagium* is located between the two hindlimbs. There are nerves within the patagium that allow a bat to sense the wing and its relationship to its body and the space around it.

### **SENSITIVE MEMBRANES**

Imagine your abdomen slowly begins to extend outwards like tendrils of a plant. As these tendrils extend they begin to form sensitive and responsive membranes that connect the empty spaces between your neck and your first finger, between your fingers, between your smallest finger and outside portion of your feet, and between your two legs. Stretch out and feel the space between these body parts stretching. Release the stretch and feel the space between those body parts folding in and becoming supple and relaxed. Articulate different body parts and feel the sensations those movements create in the parts they are connected to via the thin membranes. Feel how moving an arm effects your neck and your hand and your leg. Feel how moving your neck effects your arm and then in turn your hand and then in turn your leg. Try moving around the room feeling the feedback from the membrane that joins your usually differentiated body parts. Imagine that there is a slight breeze blowing and that you turn to face this current of air. Feel it tickle the membranes that exist between your neck and arms, your fingers, your hands and legs, and your two legs. Feel the air ever-so-slightly breathing into and filling the membrane, like the wind that fills a ship’s sail. Let the current of air grow stronger. Actively resist the current so your membranes become taught. Begin to move your outspread hands and your outstretched arms against this current of air. Lift the same arm and leg off the ground and let the current propel you to turn or shift your body in space. Lift the other arm and leg into the current of air. Imagine many currents of air, all blowing from different directions. Explore these currents and the effects of these currents on you as they blow against your invisible membranes that connect your body parts. Where do these winds take you? Where can they take you?

# D

## **DHOLE**

**KINGDOM:** Animalia

**PHYLUM:** Chordata

**CLASS:** Mammalia

**ORDER:** Carnivora

**FAMILY:** Canidae

**GENUS:** *Cuon*

**SPECIES:** *C. alpinus*

The dhole, also known as the Asiatic wild dog, lives in multiple habitats in Central, South, and Southeast Asia. Highly social, dholes gather in groups, known as clans, that can consist of up to forty members. Unlike wolves, clans of dholes operate in the absence of a rigid hierarchic system. In contrast to wolves, which routinely hunt in highly organized packs, dhole clans frequently break into small packs for brief periods. Because of this social flexibility, dominant dholes in a clan are often difficult to identify.

### **FLEXIBLE AND FIRM HIERARCHIES**

Imagine that different parts of your body are different members of a dhole clan. Perhaps your hands, feet, and head are all separate individuals. Perhaps your knees, elbows, and tail bone are all separate individuals. As social animals, dholes are responsive and attuned to one another, but, since they operate in the absence of a rigid hierarchy, different members of dhole clan can propose different actions and take turns initiating and following each other's movements. Imagine that the dholes are all engaged with different activities that they find stimulating in the world that is the space around you. They aware of each other, but largely focused on their own movement. Occasionally let one initiate a movement that the others notice, respond to, and follow if it interests them. Let the different dholes that are part of your body trade turns leading and following at different times. Remember to give each one a turn leading and remember that not every dhole will necessarily respond to every movement made by his or her brethren. After you have let this clan of dholes explore their environment and interact with one another, let them transform into a pack of wolves. Unlike dholes, wolves maintain a rigid organizational structure, so let one of your wolves become dominant. It will initiate all actions. The other wolves must recognize and participate in this action. The other body parts must follow the trajectories determined by the body part you have chosen to be the dominant wolf. Let the different wolves in your body begin to organize around this body part and actively move through the space. How are your reactions and movements different when you are composed of wolves compared to when you are composed of dholes? How is your body organized differently? Continue to switch between being a clan of dholes and a pack of wolves and you will begin to embody the kinetic qualities inherent within flexible and rigid hierarchies.

# E

## **ELEPHANT**

**KINGDOM:** Animalia

**PHYLUM:** Chordata

**CLASS:** Mammal

**ORDER:** Proboscidea

**FAMILY:** Elephantidae

**GENUS:** *Elephas*

There are two different species of elephant—the Asian elephant, and the larger, African elephant. Both species of elephant possess a specialized appendage called a proboscis, or trunk. An elephant's trunk is a versatile appendage and it is used by its owner to breathe, touch, grasp, spray, and smell. It can even be used to produce a variety of sounds. A trunk contains no bones but may have many as 150,000 separate muscle fascicles. These numerous muscle fascicles enable the trunk to be extremely sensitive, flexible, and strong. An elephant's trunk has a dynamic range of movement possibilities and it can be used for powerful actions such as wrestling with other elephants or lifting objects as large as tree trunks, and also for delicate actions such as wiping its own eyes and cracking open nuts without breaking the seeds inside. The trunk can also be used to suck up water to drink and spray on itself or others. When swimming through rivers, the trunk can be even as a snorkel.

## **PHANTOM LIMBS**

Imagine a trunk begins to slowly grow out of a region of your body. Sense where this trunk attaches into you. Start manipulating your flexible, sensitive, and strong appendage in the space around you and sense all the movement opportunities that are open to you. Like a giant tongue your trunk can move in almost any direction and can easily twist, wrap, turn, bend, fold, retract and extend. Take time exploring all the places that this trunk can be in. Now attend to your trunk and the place where the trunk emanates from. Feel the movement in your body created by the movement of the phantom trunk. Begin to follow the movement impulses created by the movement of your trunk as you imagine it flexibly, sensitively, and strongly encountering the world.

# F

## **FIREFLY**

**KINGDOM: Animalia**

**PHYLUM: Euarthropoda**

**CLASS: Insecta**

**ORDER: Coleoptera**

**FAMILY: Lampyridae**

There are over 2000 different species of fireflies—soft-bodied beetles that are capable of generating light. The light that fireflies produce is created by chemical reactions occurring within specialized organs. Fireflies use this chemical light to communicate.

### **RHYTHMIC PULSES**

Close your eyes softly and imagine that your body is a dark place—a forest on a moonless night. The skin on one portion of you is the forest floor while the skin on the opposite portion of you is a thick canopy of trees that blocks starlight out. Imagine you can produce a small light in a small and specific area of your body. The light you produce is not hot and it only illuminates the space around it for a brief moment. Feel the pulse coming from light inside your body. Create a rhythm with this pulse and begin to, ever so slightly, move the small area that is pulsing. Keeping that pulse of light and its associated small movement going, imagine another area of your body begins to pulse in response to your first light and then, eventually, to also move ever so slightly. Slowly, one by one, begin to add more pulsing lights to the dark forest that is your body. Perhaps some of these lights are responding to the first light, or perhaps they are responses to the second light, or the third, or the fourth...Begin to telescope out of your body to a position in the canopy of the trees. Watch your forest flicker and glow.

# G

## **GECKO**

**KINGDOM: Animalia**

**PHYLUM: Chordata**

**CLASS: Reptilia**

**ORDER: Squamata**

Geckos are small lizards found around the world in areas with a warm climate. The feet of some species of gecko have special qualities that lets them adhere to almost any surface.

Geckos that can adhere to surfaces have specialized toe pads whose structure is composed of spatula-shaped “setae” arranged in groups called “lamellae.” These structures enable weak chemical forces called “van der Waals forces” to form between the toe pads and the surface that they are on. These forces enable a gecko to momentarily bond with the surface it is in contact with.

### **ADHESIONS**

Walk around the room and feel your feet slide along the floor. Rock your body side to side and back and forth and feel the edges of your feet or your whole foot come off the floor.

Now imagine that your toes have setae arranged in groups of lamellae on the bottom surface. Slowly walk around the room and feel your toes make contact and then bond with the floor surface. Lift one leg into the air and feel yourself hold securely, anchored by imaginary van der Waal forces. Rock your body backwards and forwards and side to side and feel all of your toes stay on the ground until *you* decide to lift them away from the floor. Reach your body away from your toes in different directions knowing that your toes will anchor you to the floor and stabilize your motion. Make larger movements than you think you should. Change the relationship between your legs, bend your knees deeply, stagger your feet into new constellations and continue to reach your body away from these multiple points of stability. When you have finished exploring your new stability pretend your finger pads also have setae arranged in groups of lamellae and walk over to a wall.

Place your fingers on the wall and imagine them attaching and becoming part of the wall. If you pull your body away from the wall, your fingers will remain attached. Feel the freedom in other parts of your body that results from the stability found in your fingers. Begin exploring the circumference of the room with your new fingers and toes. Imagine being able to climb up to the ceiling or the outside of the building you are in. Imagine all the different perspectives of the space around you that could be possible if you could, for a moment, be stable there. Imagine if spaces were designed so you could orient all around them rather than only inside them.

# H

## **HORNS**

**KINGDOM: Animalia**

**PHYLUM: Chordata**

**CLASS: Mammalia**

**ORDER: Artiodactyla**

**FAMILY: Bovidae**

There are over 91 species of antelope and the horns of each species varies in form.

Antelope horns can manifest in spike-like, twisted, spiraling, lyre-like, straight, and curved forms. From a distance the horns of different antelopes from the same species can appear almost identical, however, the specific dimensions of any one particular antelope's horn is particular to that individual. While there are generalizable shapes, each horn is its own unique form.

### **ANIMATING FORMS**

Examine different horns from antelope of different species. Look at the differences and similarities that exist between them. Feel these three-dimensional shapes in different areas of your body, perhaps as specific areas of tightness or laxness that join two or more areas together. Or, render these shapes in the space around you. Trace them with your fingers, hands, wrists, elbows, shoulders, neck, sternum, either side of your rib cage, pelvis, spine, knees, ankles, feet, and toes. However large or small you make them, try and follow their exact relative dimensions, rather than creating a general idea of the horn. Create a phrase of movement based on different parts of your body attending to the shapes you see and feel in the horns of different species of antelope. Find a type of horn that you are particularly drawn towards or pick an arbitrary one. Compare that horn to other horns from the same species of antelope. How are they different? Try and feel the difference through movement. Now pay attention to the particulars of that one particular horn, perhaps even examine a close-up photograph. Imagine your body is slowly caressing and feeling all the surface details of the three-dimension form and embodying its particular form. What seemed like a simple shape now appears complex.

# I

## **IBEX**

**KINGDOM:** Animalia

**PHYLUM:** Chordata

**CLASS:** Mammalia

**ORDER:** Artiodactyla

**FAMILY:** Boviae

**GENUS:** *Caprinae*

**SPECIES:** *C. Ibex*

The ibex is a species of wild goat that lives in the European Alps. Ibex have specialized hooves with sharp edges and concave undersides that act like suction cups. These hooves allow them to navigate rough and steep alpine terrain.

### **ASCENDING AND DESCENDING**

Transform your body into a mountain range. Imagine all of its steep cliffs, multiple plateaus, and craggy landmarks. Now imagine a small ibex, perhaps the size of a freckle standing at the base of this mountain range. Follow it as it journeys upwards, plotting a course to the peak. Feel it navigate over and around the muscular, bony, hairy, rough and soft structures that constitute the structure of your mountain. Its movement will not be constant, as it will frequently have to take detours as it ascends your body. Follow the ibex closely. Imagine it periodically resting on particularly prominent areas like your ankles, kneecaps, hipbones, parts of your ribs, clavicles, chin, or ears. When the ibex has finally made it to the summit take a moment and remember the course it plotted as it climbed the mountain you imagined yourself to be. Now follow it again as it charts a different course back down your body. Remember the sensations of its specialized hooves making contact with your body's varied topography. Using these sensations, create a phrase of movement that honours the ibex's irregular navigation of all your many steep cliffs, multiple plateaus, and craggy landmarks.



# J

## **JELLYFISH**

**KINGDOM: Animalia**

**PHYLUM: Cnidaria**

The bodies of jellyfish are comprised of a bell-like structure with multiple tentacles that trail behind them. Around the edge of the bell-like structure is a ring of muscle and when that ring contracts the bell-like structure expels the water that is inside it. After contracting, the muscles relax, and more water fills the bell-like structure as it opens wide. This is a jellyfish's primary means of locomotion.

### **JELLYFISH HANDS**

Imagine that one of your hands is a translucent jellyfish floating in the space in front of you as if suspended in water. The tips of all your fingers are part of the ring of muscle that expels water when it contracts. From the centre of the palm of your hand dangles the jellyfish's many long tentacles. Slowly let your fingers drift away from each other. At the moment when they are furthest away from one another let the ring of muscles they are part of contract quickly to expel the water that has collected inside. The action of expelling this water will move your hand ever so slightly in a direction away from the dangling tentacles as a small vortex of water is created and expelled. Feel the syncopated dynamic of your hand and the syncopated rhythm of the movement as water is pushed out energetically and then rushes back in passively to fill the bell that your fingers are part of. When you are comfortable with this movement, allow your other hand to become another jellyfish moving at its *own* rhythm in the space around you. Imagine the movement of the many tentacles as they respond to the currents of water that incessantly tickle their poisonous filaments.

# K

## **KNIFEFISH**

**KINGDOM:** Animalia

**PHYLUM:** Chordata

**CLASS:** Actinopterygii

**ORDER:** Gymnotiformes

**FAMILY:** Gymnotidae

**GENUS:** *Electrophorus*

**SPECIES:** *E. Electricus*

Knifefish are members of a group of mainly freshwater fish that are capable of producing electrical fields. Knifefish use these electrical fields for communication and navigation. A type of knifefish known as the electric eel even uses electrical fields for attack and defense. The electric eel has three pairs of organs that produce electricity and comprise the majority of its body.

### **GENERATING FIELDS**

Imagine that you are able to generative electrical fields in your body and are able to consciously direct these electrical fields. Feel energy accumulate in a specific spot deep inside you and then imagine directing it outwards as it travels along a specific trajectory to an area outside of you. Start with very small impulses that travel within the architecture of your body along delicate pathways. What sort of sensations do you feel when you are generating the electricity within your body? What sort of sensations do you feel when you are directing the electricity within your body? What sort of sensations do you feel when you are releasing the energy outside of your body? Begin to increase the power of the impulses within you and explore the many different routes that these impulses can follow and the many places they can exit your body. Imagine building up the electrical impulses for a while and the releasing them very slowly and deliberately. Imagine building up the electrical impulses for a while and then releasing them quickly and haphazardly. What sort of movements do these different imagined actions initiate depending on the way that you feel them generating, coursing through you, and being released?

# L

## LION FISH

**KINGDOM:** Animalia

**PHYLUM:** Chordata

**CLASS:** Actinopterygii

**ORDER:** Scorpaeniformes

**FAMILY:** Scorpaenidae

**GENUS:** *Pterois*

Lionfish are striking marine fish found in Indo-Pacific waters that are characterized by banded patterns of scales, conspicuous pectoral fins, and long, poisonous fin rays. These poisonous fin rays extend out significant distances from a lionfish's body and encase the fish in a flexible and distributed protective *sheath* that undulates around their body in relation to the water currents swirling around them.

### RAYS OF TISSUE

Lying on your back, extend your arms and legs into the air. Imagine that your arms and legs are lethal but beautiful fin rays that extend out of the body of large striped fish. Do not tense your arms and legs but keep them fairly straight yet relaxed. These rays are responsive to the imaginary currents that ripple around them. Do not lead your motion with either your fingers, wrists, elbows, or shoulders. Think of your entire arms and entire legs as comprised of a single soft tissue that maintains an orientation away from the body yet is responsive to the forces around it as it sways like tree branches in the wind.

# M

## **MURMURATON OF STARLINGS**

**KINGDOM: ANIMALIA**

**PHYLUM: CHORDATA**

**CLASS: Aves**

**ORDER: Passeriformes**

**FAMILY: Sturnidae**

**GENUS: *Sturnus***

**SPECIES: *S. Vulgaris***

A murmuration is the phenomena of hundreds or even thousands of starlings flying together and creating a whirling, ever-shifting form. The form of the murmuration modulates continually in relation to the movement of thousands of bodies relating to one another within a three-dimensional, responsive network that appears cast against the sky.

### **MURMURATING**

Imagine that your body is not formed from skin, muscle, ligament, tendon, and bone, but instead composed out of thousands of miniature starlings that are continually responding to one another's impulses of movement. Feel your form, a form composed of thousands of forms responding to thousands of other forms. Feel the many pulses of energy, changes in direction, and shifts in tempo that begin to move your body throughout the space, as you fold and unfold, twist and turn, make and unmake yourself. Now attend to one particular bird within this murmuration that is your body. While moving, sense it sensing the others around it. Follow it as it navigates a chaos that is only chaotic when viewed from the outside.

# N

## **NAUTILUS**

**KINGDOM: Animalia**

**PHYLUM: Mollusca**

**CLASS: Cephalopoda**

**ORDER: Nautilida**

**FAMILY: Nautilidae**

Nautilus are relatives of squids that have intricate spiraling shells. Unlike some marine animals that find shells to live in, nautilus create their own shells by gradually exuding proteins and minerals from their skin.

### **IMPRESSIONS AND EXPRESSIONS**

Imagine that your skin could exude proteins and minerals that could create a shell that encased your body or parts of your body. Starting with a small area, perhaps your hand or your foot, feel the exterior dimensions of that area in detail. After you have explored those details imagine that just slightly below the surface of the skin there are internal structures that exude proteins and minerals. Feel these proteins be exuded by your skin and slowly accumulate on the surface. Your shell will grow from the bottom up and gradually begin to take on a solid form whose inside will resemble your outside. When the shell around your hand or foot has formed, slowly slip your hand or foot out of it and examine its outside. Now imagine a much smaller animal finding this unique form, exploring its insides—perhaps in order to make a home or perhaps just out of curiosity. Create a phrase of movement based on this organism's exploration of the shell you expressed. When you are finished, create a shell for your entire body, a record of your activity noticing your exterior surfaces. Slip outside, and through movement explore this strange landscape. What are your impressions of your expression?

# O

## **OCTOPUS**

**KINGDOM: Animalia**

**PHYLUM: Mollusca**

**CLASS: Cephalopoda**

**ORDER: Octopoda**

There are over 300 different species of octopus—all of which have soft bodies and 8 limbs that radiate out from beak-like mouths. An octopus can rapidly alter its soft body's shape to enable it to squeeze through small gaps and into tiny spaces. Octopuses move primarily by ejecting a jet of water out of an organ called a siphon. This deliberate action propels the octopus through its watery environment.

### **SHIFTING DIMENSIONS and SIPHONING SPACE**

Imagine that your body can alter its dimensions in order to squeeze through small gaps and enter spaces that your body could not usually fit into. Scan the room around you and notice different places that your body or parts of your body could not normally access, such as the space under a chair or couch, the spaces in a bookshelf, or even small boxes or containers. Imagine your body approaching that space and sending a small part of you into that space in order to perceive the dimensions of the space and prepare the rest of your body to fit into it. Feel the form of your body's dimensions rearranging themselves so that you slowly take the form of the spaces between things. How does this process affect your movement? How does your movement embody aspects of your imaginary transformation? Now imagine that your body has a hollow organ inside of it called a siphon. With your siphon you can propel yourself through your environment by sucking water into to you and then ejecting that water along a certain trajectory so that you will travel in the opposite direction. Where is your siphon located? It can be anywhere on your body. When you have located it, feel yourself sucking water from the space around you and slowly becoming full. When you are full, choose a direction you would like to move in and begin to squeeze the water in your siphon out of you. If you squeeze slowly you will move slowly. If you squeeze quickly, you will move quickly. Once you have expelled the water, let the momentum you created carry you and drift a bit until you begin to come to rest. Look around you and choose another place in the space around you that you would like to visit, perhaps another space you could imagine squeezing through, into, or around. Take more water into your siphon and then squeeze it out to propel yourself forward towards this space. How many times do you have to squeeze water out of your siphon in order to reach your destination? Does it only take one try or is it a journey composed of many stages? If it only took one try, can you imagine making your siphon smaller so that you only fill a small area of your body? If it took many tries can you imagine making your siphon larger, so it fills a large portion of your body? What if your body had many siphons and was made up of many octopuses?

Imagine many protean bodies moving inside of you, maneuvering around one another, changing forms and colours, and constantly exchanging places—pulling the space around them inside, and then directing the space inside of them out into the space around them.

# P

## **PANTHER CHAMELEON**

**KINGDOM:** Animalia

**PHYLUM:** Chordata

**CLASS:** Reptilia

**ORDER:** Squamata

**FAMILY:** Chamaeleonidae

**GENUS:** *Furcifer*

**SPECIES:** *F. pardalis*

The panther chameleon is a species of chameleon with vibrant colours that is found in the forests of Madagascar. Like other species of chameleon, the panther chameleon changes colour. However, chameleons cannot change their colour to match their exact environment. Chameleons' changes in colour are affected by heat, light, and mood. Generally, the more excited a chameleon gets the brighter and more vibrant it becomes, as a lattice of crystals in their skin becomes stimulated.

### **CRYSTAL PATTERNS**

A panther chameleon's base colour is related to their "locale." Panther chameleons living in different places will have different base colours. Imagine that you have glittering scales and that their colour is related to your lived environment, the specific neighbourhood you reside in, or maybe even the apartment or house you dwell in. This is the colour that indicates that you are relaxed. If your living arrangements are not relaxing at the moment, imagine another place where you feel comfortable. What colour is this colour? Scan your body and imagine a lattice of crystals underneath your skin that creates a pattern. Follow the pattern all around, so you are aware of its dimensions and can sense its borders. When you get excited, the lattice pattern becomes excited, and changes colour. Try slowly exciting a certain area of your body through movement and imagine the lattice under your skin begins to change colour. What types of colours are created by your enfleshed lattice? How does the pattern the crystal lattice creates change when different areas of your body become excited? How do different types of movement excite the lattice? If you get too excited, become still and feel the pattern slowly return back to its calm base state. Chameleons often change colour in response to one another. If you are in a room with other people, try walking around the room and sense how your lattice of crystals lights up in response to the other people that you encounter. Imagine if they could see the colours and patterns that they create. What are the patterns you create on the scales of the people around you? If you are by yourself, imagine meeting different people that are in your life now or have been part of your life and sense the response of your glittering crystal lattice as these images of them washes over your image of yourself.



# Q

## QUEENSNAKE

**KINGDOM:** Animalia

**PHYLUM:** Chordata

**CLASS:** Reptilia

**ORDER:** Squamata

**FAMILY:** Colubridae

**GENUS:** *Regina*

**SPECIES:** *R. septemvittata*

The queensnake is a North American nonvenomous semiaquatic species of snake found in and near lakes in Ontario. The queensnake is also known as the banded water snake, the moon snake, and the willow snake. Like other species of snake, the queensnake possesses no legs and must locomote by moving its long body in various ways. When on land, snakes have four main types of locomotion: undulation; sidewinding; concertina; and rectilinear. The videos below show examples of all four types of snake movement.

**Undulation:** <https://www.youtube.com/watch?v=ZKaYbMZqTkY>

**Sidewinding:** <https://www.youtube.com/watch?v=aSfiZfGAGro>

**Concertina:** <https://www.youtube.com/watch?v=xo0pVlzUBc8>

**Rectilinear:** [https://www.youtube.com/watch?v=xZ7BLcqYU\\_I](https://www.youtube.com/watch?v=xZ7BLcqYU_I)

## SERPENTINE SENSATIONS

Look at the different types of snake movement. Imagine these types of movement occurring within your body. Perhaps at first, imagine these movements happening in your spine, but not for the purpose of replicating them for an outside observer. Instead, focus on interpreting the sensation they provoke in you as you watch their movement unfold. You do not need to lie on the ground and mimic the snakes (although you are certainly free to do so if you wish).

Remember that the movement is a result of the body of the snake coming into contact with the ground, that the movement occurs in relation to other forces. How does a snake's ceaseless undulation create different sensations and consequently different movement possibilities in comparison to sidewinding, concertina, and rectilinear movement? When you have explored all of these patterns of movement with your spine, try sending the sensation of these movements to less "snake-like" areas of your body, perhaps your thigh, or your forearm. Feel one snake rippling, pulsing, probing, and oscillating through you in different directions along different trajectories and at different speeds. Feel many snakes rippling, pulsing, probing, and oscillating through you in along different trajectories at different speeds. Now translate those feelings into movement as you wind through the room while serpents wind through you.

# R

## **RIVER OTTER**

**KINGDOM:** Anamalia

**PHYLUM:** Chordata

**CLASS:** Mammalia

**ORDER:** Carnivora

**FAMILY:** Mustelidae

**GENUS:** *Lontra*

**SPECIES:** *L. canadensis*

North American river otters, also known as common otters, are semi-aquatic mammals found in rivers, lakes, and other waterways—as well as along coastal regions. They nest in burrows close to the water's edge and subsist on a diet of aquatic animals including fish, amphibians, and arthropods. In order to catch fish in the water, otters must be very agile and maneuverable and it, like other aquatic mammals, they have spines that are very flexible. An otter's flexible spine enables it to shift direction, rotate, and undulate its body in order to locomote in the water.

### **BODIES IN BODIES OF WATER**

Imagine that your spine is an otter swimming underwater in a lake. Agile and supported by the water, begin to move and explore your environment using only the movement of your spine. Travel deep down under the water to explore the rocky surface beneath you. Perhaps there are old logs that you can swim under, or through, and maneuver around. Perhaps you are weaving through strands of thick vegetation. Perhaps you see a fish swim quickly swim past you. Rotate your spine to follow the fish as it darts away from you. In order to catch the fish, you will need to undulate your spine, rotate your spine, and change the direction of your spine quickly. If that fish gets away, search for another one. Or, perhaps come to the surface and scan the shoreline for amphibians, moving slowly and deliberately. You are always in motion but trying not to disturb the surface of the water with your motion. If you need to rest, come to the shore and dive into a burrow near the shoreline. If you are still energetic, allow your whole body to become the water that the otter is in, and let the otter that was your spine become lively somewhere else in your body. The first otter is now joined by another otter who is also lively. Let them explore the lake that your body has become as they weave under, over, and around each other and respond to the lake's contours, many environments, and unique inhabitants.

# S

## **SPIDER**

**KINGDOM: Animalia**

**PHYLUM: Arthropoda**

**CLASS: Arachnida**

**ORDER: Araneae**

There are over 45,000 different species of spiders and they are found on every continent with the exception of Antarctica. All species of spider have eight legs and specialized structures on their abdomens called spinnerets that extrude silk. Silk is not usually produced from just one orifice, but from many different ones. This diversity allows different types of silk to be made by the spider for many purposes including spinning webs, wrapping-up insects, creating egg-cases, and even making “parachutes” to glide on the wind. A species of spider known as the crab spider is able to produce these special parachutes and travel long distances floating in the air. Before gliding on the air, crab spiders lay down a silk anchor line and then reach up into the air to feel air currents. After feeling for the wind, the spiders begin to produce many long filaments from their spinnerets. The silk filaments the crab spider exudes are thinner than the wavelength of visible light and use the viscosity of the air to stay afloat.

### **SILKEN CHUTES**

Imagine you have the ability to exude thin filaments of silk from spinnerets in your body, filaments that will be able to lift you into the air. Lying on the ground, extend your arms up into the air and begin to feel the air currents in the room you are in. If this is difficult, perhaps roll down your sleeves so that you can feel the air moving around the skin of your forearms. If you find a current of air, imagine exuding microscopic silk threads that float into the air above you. Perhaps they are coming out of your fingertips, perhaps they are coming from somewhere else on your body. Follow each silk thread as it leaves your body and trace its trajectory upwards into the currents of air that you can feel around you. As you send more and more silk threads into these currents feel yourself growing lighter. Continue to send more and more threads into the air and continue to grow lighter and lighter until you feel your body begin to move in the direction that the air current is blowing. Slowly come to standing and feel yourself drifting on your many invisible threads you have created. Glide to another space in the room. Perhaps this a place where you could begin to spin a web of meaning.

# T

## TOAD

**KINGDOM:** Animalia

**PHYLUM:** Chordata

**CLASS:** Amphibia

**ORDER:** Anura

**FAMILY:** Pipadae

**GENUS:** *Pipa*

**SPECIES:** *Pipa*

Surinam toads are freshwater amphibians found in swamps, muddy river banks, marshes and flooded forests in South America and the Caribbean. They are shaped like leaves and almost completely flat. Surinam toads have spectacular reproductive habits. During their aquatic mating choreography, fertilized eggs become embedded in the female's skin. Afterwards the eggs descend deeper into the skin and become implanted in small pockets. The embryos remain in these pockets for months as they develop through their tadpole stage and eventually emerge as miniature, yet fully developed toads. After her young have departed the female Surinam toad sheds the layer of skin that was used to nurture her young.

<https://www.youtube.com/watch?v=o9S8ZoxOjOQ>

### NURSERY BODIES

Imagine that there are dozens of soft and delicate eggs lying on the surface of your skin. Although the Surinam toads' eggs are deposited on her back, yours can be located anywhere you would like. Feel these eggs slowly descending into your skin. Feel the soft tissue spreading in response to the eggs' movement and forming into flexible chambers that hold the eggs secure and safe. As they begin to develop, you start to sense movement within the eggs as they swell and transform into small tadpoles. Eventually, you feel the movement of a large brood of small tadpoles, all of them individually exploring their own space under your skin. One by one, or perhaps a few at a time, the tadpoles develop into miniature beings much like yourself, and begin to leave your body. Feel the small beings squirming inside you and popping out of your skin. Do they emerge slowly and deliberately or quickly and haphazardly? Consider their individual and collective trajectories as they exit your body. Sense the wake of their movement in the fluid surrounding you. When they have all departed, imagine shedding that pitted layer of skin that once served as a nursery for so many lives.

# U

## **ULYSSES BUTTERFLY**

**KINGDOM:** Animalia

**PHYLUM:** Euarthropoda

**CLASS:** Insecta

**ORDER:** Lepidoptera

**FAMILY:** Papilionidae

**GENUS:** *Papilio*

**SPECIES:** *P. ulysses*

The Ulysses butterfly is a large swallowtail butterfly found in Australia, Indonesia, Papua New Guinea, and the Solomon Islands. There are almost 180,000 species of butterflies and moths, each with their own unique body plan, including unique wings. Butterflies and moths have a four-stage life-cycle. Adults deposit eggs on the plant that their larvae will feed on. These larvae, known as caterpillars, will grow in size and eventually pupate within a structure known as a cocoon or pupal sac in a process known as chrysalis. When their transformation is complete, the skin of the cocoon will split, and a butterfly or moth will emerge. After its wings have dried off and expanded to full size, it will fly away. During a caterpillar's chrysalis within a pupal sac, a caterpillar makes and unmakes itself by unforming and reforming its body. During this process parts of the caterpillar become fluid-like but certain groups of cells survive the digestion process. These cells that remain are called imaginal discs, and even before a caterpillar hatches it grows an imaginal disc for each of the body parts it will have as butterfly—a being that will move and live differently.

### **MAKING AND UNMAKING**

Walk around the space you are in, recognize the actions that you are doing, and the sensations that you are feeling, but also contemplate having a different body, one that moves and feels differently. As you are walking, identify different areas that are significant to the body that you are imagining—create your imaginal discs. Slowly, come to rest on the floor or sit in a comfortable place where your body is supported. Slowly spin an imaginary cocoon around your whole body. Take the time to feel your body become more and more still as the cocoon forms. When the cocoon is completed you will begin to imagine dissolving your body into a thick fluid full of nutrients—except for the areas you identified during your walk. Hold onto the image of these particular areas as your body slowly reforms around them. You will be using material from your old body, the parts that you do not need anymore. As your body slowly reforms around these spots, feel the connections between these new parts and the new sensations that are available to you now. Still lying still, sense the dimensions of your new body, and imagine what you can do with it. When you are ready, emerge from your cocoon, and come to rest in another position. Breathe deeply, stretch your new limbs out and feel the new spaces that have opened up inside your body. When you are ready, slowly stand up and begin to explore the space around you.

How does your new body feel? What can it do? What is the space around you like? How can you navigate it differently now? Perhaps you can envision other things differently as well? Perhaps you can envision a world where other creatures, besides humans, make themselves.

# V

## **VAMPIRE BAT**

**KINGDOM:** Animalia

**PHYLUM:** Chordata

**CLASS:** Mammalia

**ORDER:** Chiroptera

**FAMILY:** Phyllostomidae

**GENUS:** *Desmodus*

There are three species of vampire bat and all three are found in the Americas. Vampire bats are small flying mammals that feed solely on the blood of other living creatures. They have the ability to detect infrared radiation as a means of locating warm areas on their prey. Infrared radiation is detected by nerves that stimulate specialized organs on the vampire bat's face.

<https://www.youtube.com/watch?v=7RostZvdoLM>

## **SENSING HEAT**

You cannot detect infrared radiation, but you can sense heat with your skin. Close your eyes, tune into the sensation of heat around you coming from different sources—the heat from your own body parts, from other living bodies, from sunlight, and from technological sources. Using your whole body or one body part, explore the heat of your body and heat in the space around you. Feel the different sources of heat, their different locations, their intensities, ranges, and trajectories. Spend time differentiating the different degrees of temperatures that you can sense. Imagine your body is more than one body, and each body can sense the heat on and around it. Try and feel the two or three of four different temperatures your different bodies can feel around you. Let these different bodies be drawn to different sources of heat that they linger with for a time, and then, eventually move away from. Respond to the sources of heat as you pass by them or, as they pass by you.

# W

## **WINGS OF BIRDS**

**KINGDOM: Animalia**

**PHYLUM: Chordata**

**CLASS: Aves**

There may be over 18,000 species of birds. Each species of birds possesses their own specialized form of wings that are shaped in such way that is particular to the particular environment that birds moves within and particular to the activities that are particular to that bird. There are four general types of wings: elliptical wings allow for incredible control, maneuverability and rapid ascent and descent; high-speed wings are tapered and allow for high speed and low energy consumption; long soaring wings allow for high speeds and dynamic soaring but are not very maneuverable and require running take-offs; and, high-lift/broad soaring wings allow for take-offs and landings in areas with limited space, soaring, and slow descents. Wings are even used for swimming, communication and display. Unlike bat wings, bird wings are formed from hundreds of special feathers that grow out of a bird's fore limbs, and together collectively contribute to the form a wing takes.

### **FORMS OF FLIGHT**

Imagine that you have wings. What do your wings look like? Where do they attach to your body? Are they growing out of your arms? Or, are they different appendages altogether? Let them unfold and stretch wide and take flight. How do the wings let you move? Do they beat fast, only once in a while, or not at all? Imagine accelerating, decelerating, gliding, soaring, diving, climbing high into the air, plunging down, banking, and even, if you are able, coming to a momentary stillness. What kind of wings do you have? Do they resemble any of the categories of wings listed above? Often the image of wings is given to dancers, but rarely are the forms of the wings made clear or specific. Take a look at the many types of different wings that different types of birds have. Examine their details, their arrangements of feathers, and how the feathers contribute to a wing's specific dimensions. Perhaps watch different types of birds flying and look at the movement of their wings, and the relationship between their wing movement and their general movement. Find a bird you are drawn to or pick an arbitrary one. Slowly transform the wings you imagined for yourself into a different, more specific pair. Feel the feathers growing out of your body. Feel the wings change form and articulate with your body differently. Now move around the room again. Are you moving differently? Do you feel differently? Are different sensations available to you now? Perhaps, try switching between different pairs of wings and feeling the gradual or immediate change to the dynamics of your movement. When you want to rest, find a place to land and fold in all of your diverse pairs of imaginary wings into your body. Contemplate being composed of many different bodies that all can exist separately or together at the same time.



# X

## **XANTUSS HUMMINGBIRD**

**KINGDOM:** Animalia

**PHYLUM:** Chordata

**CLASS:** Aves

**FAMILY:** Trochilidae

**GENUS:** *Basilinna*

**SPECIES:** *xantusii*

Xantus's hummingbird is a species of hummingbird found in Baja, California. Like other species of hummingbirds, Xantus's hummingbirds have amazing flight abilities. They are able to accelerate and decelerate quickly, hover in mid-air, and turn on a dime. They use these abilities to move from flower to flower to harvest the nectar they eat without ever touching down on the ground or resting on plants.

### **HUMMINGBIRDS IN A GARDEN**

Imagine that you are in a lush garden filled with many kinds of plants of different shapes and sizes growing to different heights. All of the plants have flowers of different shapes and sizes that are bursting with nectar. Some of these flowers are found just off the ground, some are at the height of your navel, while others are on trees overhead, almost out of reach. Forget about your whole body. Imagine that your hand is a small Xantus's hummingbird and it explores the garden you envisioned. The hummingbird that is your hand weaves a unique path through the tangle of diverse plants you imagined. You can move in a sustained manner and quickly explore the entire garden in search of certain flowers, or you can accelerate and decelerate often, relentlessly change direction, and continually shift up, down, left, right, and diagonally in space, hovering from instant to instant to take deep sips of nectar from every flower you find. Imagine the one hummingbird that is your hand is joined by another one that is your other hand, or one of your feet. Divide your attention between the two hummingbirds and let each one individually explore the many sources of nectar in the garden. Although they are competing for this nectar, they are not aggressive toward one another. Let them whiz past one another and through the space they are sharing, more focused on the flowers than each other. They do not need to be in the same area. Perhaps one prefers the nectar in the large flower growing from the trees, while the other prefers the nectar found in the numerous but tiny flowers growing near the ground. Let one hover briefly while the other searches. Let them both search together. What happens when another hummingbird begins to form in your body? What happens when two, or even three more form?

# Y

## YAK

**KINGDOM:** Animalia

**PHYLUM:** Chordata

**CLASS:** Mammalia

**ORDER:** Artiodactyla

**FAMILY:** Bovidae

**GENUS:** *Bos*

**SPECIES:** *B. mutus*

The wild yak is a large horned mammal that lives in small herds in the Himalayan mountains. Yaks are sturdy animals, with curved horns and a shaggy coat of hair that insulates them from their windy and cold environment. Sometimes this dense coat, which can be black, brown, or even golden, reaches all the way to the ground and forms a “skirt” around their entire body.

### GROWING HAIR

Imagine thick, heavy hair begins to grow from a part of your body. The sensation is not painful, but you can feel the part of your body where the hair is beginning to grow out from becoming heavier and heavier as all the strands becomes longer and longer. When you move, you can feel the sensation of the hair moving in response to your responses, and the hair still moving for an instant when you become still. Let more thick hair grow out of other parts of your body and feel those parts of your body become heavier and heavier as the hair grows longer and longer. Continue to move in space and feel the movement of the hair moving in response to your movement. What happens if you shake your body? Or if you turn? How does the hair feel swirling around you? For an instant, run quickly and feel the minute tug of all the different strands of thick hair as they are pulled behind you. Stop quickly and feel the minute tug of all the different strand of thick hair as they continue their momentum forward, backwards, or to the sides. Finally, feel thick heavy hair slowly growing out the skin on your whole body, let is blend into the hair you have already grown. Let it grow all the way down to the ground until it forms a “skirt” that is continually responding to your own responses to your environment. It is very warm, but you are not hot. It is very dense, but you are not itchy. Try moving all your limbs as they momentarily move against the weight of your thick coat, and for a moment, peak out, only to be hidden again once they return under you. Perhaps you want to lie on the ground. Perhaps you can roll on the ground protected by your warm coat. Perhaps you want to rest since your head is now supported by a pillow of fur that grows out of you.

# Z

## ZEBRA

**KINGDOM:** Animalia

**PHYLUM:** Chordata

**CLASS:** Mammalia

**ORDER:** Perissodactyla

**FAMILY:** Equidae

**GENUS:** *Equus*

There are three distinct species of zebra: the Grévy's zebra, the mountain zebra, and the plains zebra. Each species of zebra has its own distinct black-and-white pattern and each individual of each species has their own unique pattern of stripes. The zebra may have these stripes for a variety of reasons: the patterns may help disrupt its outline and help hide the zebra; when the zebra is in motion the stripes may dazzle and confuse an observer; the stripes may allow other zebras to identify one another; and, the stripes may even cool the zebra because the black and white patterns may cause air currents to form around the animal.

<https://www.youtube.com/watch?v=J3y-wHsGw9s>

### SENSING STRIPES

Imagine that you have your own unique pattern of black-and-white stripes on your body.

Take the time to feel each stripe, however large or small forming on your skin, and wrapping around the contours of your body. Trace in your imagination the form of each stripe, where it begins and where it ends. When your body is covered in these stripes begin to move a part of your body and feel the stripe warp as your muscles and bones slide underneath it. Shift your attention to another body part and explore that body part's stripes and their movement over top of your movement. Imagine stepping outside of your body and observing the movement of, not your body, but the stripes running around the surface of it. Perhaps start with very simple motion and then gradually make the movement more complicated as you turn around in space and observe yourself and your stripes turning.

Follow one stripe and when you reach the end of that stripe hop to the next one and follow it until it ends and then hop to the next one. Can you confuse yourself by moving quickly, or is the image clear and precise? If are sufficiently dazzled by your own image, come back into your body and feel the currents of air forming around the stripes, whisking away any confusion. Zebras are black with white stripes. Were you black with white stripes? Or, were you white with black stripes? Trying thinking about you, your body, your many body parts, and your stripes differently, and then try this meditation again.

## CHAPTER 5

*How like thought. How like the mind it is!*

Helen Keller, on feeling the vibration and movement of a dancer jumping, as reported in Martha Graham's *Blood Memory* (1991)

### ANIMAL REFLECTIONS

During the process of conceptualizing, creating, and producing *ARK* and *ARCHE I* engaged with many different ideas from many different disciplines and fields including postmodern philosophy, evolutionary biology, ethology, ethological criticism, dance ethnography, phenomenology, zoo studies, zoo design, and performance theory—ideas that are often kept separate. After completing the artistic process, many of these ideas began, despite their differences, to roam around within my imagination and coalesce in sympathetic, antagonistic, and symbiotic constellations. The following “jumping” and overlapping reflections are intended to be illustrative of their productive intermingling and entanglement and meditate on: performance practices in theatrical and zoological contexts; forms of life, forms of display, and forms of practice; the evolution of lifeforms, art practices, and zoological animal staging strategies; and, embodied research with human and nonhuman subjects. In the first reflection, similar concepts developed by a dance phenomenologist/evolutionary biologist and a philosophical ethologist are used as the means to generate two speculative trajectories for zoological designs that situate animals as either evolutionary or performative forms of life. In the second reflection, I contemplate the creation and production of *ARK* under the light cast by ideas about cultural poaching,

utopias, and heterotopias. In the third reflection, I suggest that research practices of ethologists predicated on an impossible invisibility inform contemporary staging strategies of the zoo and, using a critique of those ethological practices, suggest a new zoological schematic predicated on witnessing lived relations. In the fourth reflection I connect scientific, dance-related, and philosophical conceptions of evolution, equilibria, and plateaus in order to wonder about the future of zoological “ecologies.” And, in the fifth and final reflection, I contrast and compare the embodied knowledge generated by the convergent and divergent practices of ethology and dance ethnography.

### **ANIMATE FORMS, PLURAL INTELLIGENCES, ANIMAL EPIPHANIES**

In “Plural Intelligences” (2016), ethological philosopher Roberto Marchesini outlines a performative theory of cognition that builds on John Austin’s (1962) and Judith Butler’s (1990) theories of performativity and Howard Gardener’s concept of “multiple intelligences” (1983). Marchesini insists “that subjectivity is based on being a body and not on inhabiting a body and that the mind too is a bodily expression” (146). In fleshing out his ideas, Marchesini “draws on phylogenetic and ontogenetic knowledge to adumbrate some of the types of plural intelligences represented among the complex configurations of cognition in different species and individual” (157) and he enunciates hypothetical categories of intelligence that include:

1. Social Intelligence: “the capacity to move in the systems of social and affiliative groups” (157).
2. Enigmatic Intelligence: “the tendency and the capacity to resolve problems oneself or engaging the nature of the problem by relying only on one’s own problem-solving skills” (157).

3. Orientative Intelligence: “the capacity to move in the world not only relying on perceptual monitoring but using geographical coordinates in such a way as to mentally visualize the context in its spatio-temporal dimensions” (157).
4. Abstract Intelligence: “the capacity to encounter the entities and events of the world, putting them into relation with a ‘catalogue of prototypes and norms’ that the subject has built in preceding interactions with external reality” (157).
5. Operative intelligence: “the capacity to act on the world and to bend it to one’s own coordinates of use, that is to say see in the world a horizon of work and use” (157).
6. Referential intelligence: “the capacity to acquire new knowledges and to refine those possessed through the relation with entity-referents, that is subjects who are accredited as capable in a particular sphere” (157); and,
7. Reflexive intelligence: “the capacity to make reference to the mind as internal world and therefore to have awareness: (a) of one’s own bodily and sentient experience; (b) of one’s own thoughts and propositional attitudes or intentionality; (c) of the self as a biographical unity of self-knowledge; (d) of the other as individual” (158).

For Marchesini, these intelligences are “a catalogue of types of being in the world and of techniques for affecting the world” (Bussolini 2016 143) that unfold in a space where “species-specific diversity must never be considered as inferior or as approximation and not even as simple ancestrally, but as different endowments correlated to a different adaptive course, where there is no place for hierarchy, progress, and perfection, but only for kinship and specialization” (Marchesini 2016 147).

Similarly, in “Thinking in Movement” (2009a [1981]) and “Consciousness: A Natural History” (2009b [1998]) dance phenomenologist and evolutionary philosopher Maxine Sheets-Johnstone outlines aspects of a non-anthropocentric, non-linguistic account of consciousness prefaced on the concept of animate forms. According to Sheets-Johnstone, “the key to the reconceptualization of consciousness and to the evolutionary import of that reconceptualization is the realization that bodies in the form of living creatures are not mere physical things but living forms” (2009b [1998] 170). Hence, consciousness “is thus not in *matter*; it is a dimension of living forms, in particular, a dimension of living forms that move” (170). For Sheets-Johnstone, considering animate forms is a way to “grasp the possibility of a true evolutionary history of consciousness” (169), as each individual of each species possesses its own particular, “*kinetic bodily logos*, a natural kinetic intelligence that is there from the beginning in predator and prey,” that is “both spontaneous and contextually appropriate” and not “a fixed and static body of knowledge but a dynamically evolving intelligence that grows and changes on the basis of past experience” (2009a [1981] 53).

By articulating the dynamic *nature* of animate life in these two similar but unique ways Sheets-Johnstone and Marchesini create an opportunity for the zoo to be interpreted as a forum for encounters with *alien forms of consciousness* where *performances of alien cognition are immanent*. Individually considered, both scholars’ articulations also offer the opportunity to imagine choreographically sophisticated hypothetical zoological spaces.

A zoological institution prefaced on a consideration of animate form might focus on opportunities for spectators to witness the bodily and kinetic continuities between species specific in order to understand a “true evolutionary history of consciousness” (2009b [1998] 169). This zoo might, in many ways, be an elaboration of current immersive trends within

zoological practice that stress “the natural” as a model (Hancocks 2001). It would engage wholeheartedly in the effort to replicate an organism’s “original” context and environment (in terms of contents and possible experiences) in order to stage animal bodies and animal movement that could be apprehended as “spontaneous and contextually appropriate” in relation to the environment around it (Sheets-Johnstone 2009a [1998] 53). Through this effort, the zoo would attempt to negotiate, mediate, diminish, or hide the unavoidable reality of, depending on your theoretical inclination, a natural human bodily logo, or cultural human habitus, affecting the articulation of a captive animal’s ascertained repertoire of movement. Although a zoo of animate animal forms would obviously internally recognize that an animate form was not a “fixed and static body of knowledge but a dynamically evolving intelligence that grows and changes on the basis of past experience” (53) it would, in order to stage a “history of consciousness” (2009b [1998] 169), explicitly work towards mitigating “spontaneous and contextually appropriate” (2009a [1981] 53) creative responses by animals to their captivity. Current contemporary schematics, which enlist taxonomical (like at the Berlin Zoologischer Garten) or environmental categories (like at the Toronto Zoo) for the ordering of their collections, could be retained and elaborated on. Taxonomical zoos could focus on the staging of divergent evolutionary processes while environmental zoos could focus on the staging of convergent evolutionary processes. Regardless, both would, through stressing the comprehension of evolutionary thought, require the enforcement of the discontinuity of embodied relations between actual animals and humans within their borders so that the zoo will “arrive at a point of equivalence, wherein the inner world of the zoo approximates the outer world of nature” and where the “narrowing of the gap between nature and the zoo habitat is a whittling down into an isomorphism” (Lulka 127).



In contrast, a zoo prefaced on aspects of the performance of plural intelligences, where there was “no place for hierarchy, progress, or perfection, but only for kinship and specialization” (Marchesini 2016 147) might depart dramatically from current existing zoological models. Being, not a catalogue of animal species, but a “catalogue of types of being in the world and of techniques for affecting the world” (Bussolini 143), its primary mandate would be to highlight the performative cognitive *differences* and unique *agencies* of animals. It might focus equally on providing animals with opportunities to demonstrate their abilities and their perceptions through their engagement with different types of spaces, attending to their unique responses to their environments, and generating responses to their responses. While this sort of zoo might certainly want to begin as a place of immersion based on ascertained or presumed requirements of particular forms, it would necessarily change its form in response to animals’ choreographic responses. The architecture of particular spaces, the particular affordances present in those spaces, and particular human conceptions of spaces would not be duly maintained along certain coordinates related to the teleology of an overarching epistemological mandate but extended into new arenas of cognition as animals “posed questions” (Despret 2016). Exhibits might transform dramatically as they veer away from a human perception of a natural environment and evolve along a trajectory indicated by individual animals’ specific types of bodily manifested intelligence. As such, this sort of zoo, which stressed that “Difference is only difference” (Marchesini 145) might be a place where animal spaces gradually became sensorially and materially differentiated according to the type of intelligence that inhabited, marked, and then shaped them—in concert and collaboration with the interpretive efforts of staff. As such, any schematics of taxonomy or natural environment initially present at the onset of the implementation of a staging of plural intelligences would likely become more and more obscured

over time through its innately unpredictable dialogue with animal beings. Perhaps in a sense, the animals and staff would be co-creating artistic installations that were the outcome of their ongoing inter-species interaction.

This type of zoological institution might be likened to the zoo suggested by David Lulka in “Boring a Wormhole in the Zoological Ark” (2010) that foregrounds “animacy” and “motility” over human optics. According to Lulka, the human-animal interactive enrichment practices of contemporary zoos already manifest as rudimentary responses to animacy because they transform the zoo “from a point to a passage itself” (137). If these practices are taken to an extreme, a zoo informed by animacy:

would be in a variable state of assembly and disassembly. With the exception of animals that exhibit a clear penchant for sedentary behavior (although this is never absolute), animals within the zoo will be upon the move, periodically moving from one enclosure to another. The exact timing, speed, and method of facilitating these movements will be developed over time through experience with the animals at hand. Zoo personnel will also be engaged in the process of preparing and reorganizing the space of the zoo, itself beginning to function like an organism. (140)

The resulting:

labyrinth of enclosures would contain varied “habitats,” varied geometries, and perhaps a varied composition of animal types designed to engage each other. In such assemblages, different “affordances” (as per Reed) between the animal and its surroundings would emerge that enliven the condition of dwelling and inhabitation. In some cases, the landscape might beneficially possess an austere quality, one frequently rejected by the

aesthetic sensibilities brought to nature by humans, but which actually offers tactile, olfactory, gustatory, auditory, and visual stimuli that bemuse, enthrall, and excite animals. In this sense, like a Rubik's cube, each enclosure possesses innumerable possibilities. (141)

Interestingly, these two hypothetical and divergent trajectories for zoo design are indicative of two responses to animal difference identified by Marchesini in *Over the Human: Post-Humanism and the Concept of Animal Epiphany* (2017). According to Marchesini, the encounter with the “heterospecific,” or nonhuman being initiates two divergent processes, an “anthropoplastic” (81) response and an “anthropopoietic” (4) response. The anthropoplastic response is characterised by the development of human knowledge and the recognition of new human possibilities and potentials and is based on the human apprehension of different animal's abilities as “things” that can be extracted from the animal body and become part of a particular human agenda.<sup>75</sup> Anthropoplastic responses furnish humans with bodily extensions in the forms of new knowledge and technologies—new forms of communication, weaponry, transportation, fashion, architecture, art, music, performance, and design—cultural endeavors so “advanced” that their creative origins in the bodies and actions of other beings. In contrast, the “anthropopoietic” (4) aspect of animal epiphany leads to the decentering of the human subject through the recognition of nonhuman predicates and subjectivities, so humans can go “beyond our nature,” project “ourselves into the animal body,” overlap “with its predicative architectures,” fly “into its flesh,” and welcome the “heterospecific heartbeat inside our body” (104). Through this embodied, kinaesthetically propelled merging between different beings:

our difference becomes colours, accessories, clothes we can exchange, words that can shorten the distance and allow for a common narrative through this identity exchange, in a sort of comedy of errors. Self-recognition means having a common basis on which we can lay the differences, in a trans-specific role-play that never takes our authority away, even in its dreamlike, stupefying, and disturbing nature. Variations on the theme of animality, biodiverse but with meta-predicative common grounds, represent the wood that can fuel human mimetic fire. To assemble them in one's body is not a difficult task, as they possess an intimate congruence: a perfect consistency with the ontological architecture of the flesh. To recognize oneself in the animal other means to decline the common grounds that tie us together, making me sympathetic with its presence, in a predicative elsewhere. It means to experience animal-being, and so to be in the deepest sense of the word, decentralizing myself from the specific predicates of human-being. (100)

Thus, a zoo that stages the logic of animate form in a manner meant to be congruous with human ideas about evolution, would be anthropoplastic in nature. It would objectify animal bodies and their abilities in order to elaborate on and “embody” a human scientific theory. It would also extend human technologies of immersion and simulation so that they encompass and then eclipse nonhuman worlds. In contrast, a zoo predicated on performances of plural intelligences would embody a different ethos. Focussed on collaborative encounters between species, it would decenter, rather than confirm, human knowledge as humans begin to take their cues from animal actions, and human technology and human practices begin to service the elaboration of animal cognition as embodied through the movement and actions of animals. Inside its protean borders, human animals would have opportunities to intervene in the conditions of their culturally-conditioned sensorial and intellectual captivity, while nonhuman

animals would have opportunities to intervene in the conditions of their actual captivity, as they both, in dialogue with one another, participatorily shape a zoomorphic environment that becomes a more “spontaneous and contextually appropriate” (Sheets-Johnstone 2009a [1981] 53) “ecstatic world” (Marchessault 2017).

The differences between a *shallow* anthropoplastic and a *deep* anthropopoietic response to animal differences can also be indicated by thinking about the hypothetical outcomes of the application of the methodologies of *ARK* and *ARCHE* to hypothetical zoological spaces. Applying the database methodology of *ARCHE*, provided that all the animal species at a particular zoo were accounted for in their relative positions in space and were already present as mere elements in the larger animal database, the act of assembling the work can be performed remotely and results in a new structure but generates neither a new internal vocabulary nor any new practices that enlist or alter sensation. In contrast, applying the experientially informed methodology of *ARK*, a methodology prefaced on personal participation, physical presence, and the possibility of dialogically responding to responsive animal beings, generates both a new vocabulary and new sensorial practices. This approach is thus subjectively determined, unique, “spontaneous and contextually appropriate” and not a “fixed and static body of knowledge but a dynamically evolving intelligence that grows and changes on the basis of past experience” (Sheets-Johnstone 2009a [1981] 53). The differences between the two works, like the differences between the aforementioned hypothetical zoos, and perhaps even like the ontological differences between the habitus of zoological architects and zoological caretakers, lies in their particular orientation towards animal beings as subjects. Marchesini might describe these differences as

akin to the contrast between actively “holding the reins of our own path” and “passively letting the other take us by the hand and lead us” (2017 93).<sup>76</sup>

### **POACHING AT THE ZOO or DANIELLE THE MEMORIUS**

One of the skills that extended training in dance fosters is the ability—performed routinely in spite of the W.B. Yeat’s poetically ephemeral question “How can we know the dancer from the dance?” (1961 [1933])—to momentarily extract a dancing body from its choreographic context. This skill is refined during classes and rehearsals in the service of aligning aspects of a choreographic phrase or work, resolving issues of individual or group execution, or identifying significant moments that needed to be accentuated or diminished—all of which, in the end, lend themselves to the goal of producing a world for an audience to witness or imaginatively participate in. In these visual, aural, and kinaesthetic worlds, individual bodies are imagined by a choreographer to be largely sublimated to the larger meaning of a choreographic work and they invariably become objects of perception.

While watching dance performances I actively use these skills in a different fashion—to *not* participate in the world I see unfolding before me and instead to watch subjects busy navigating a world not of their own design. I have found the ability to focus in and attend to a body, the connections between various bodies, or even the relations of parts of different bodies, a practical way to endure the experience of watching performances that are more often than not, to borrow a popular academic euphemism, problematic. It is also, in an artistic period dominated by works unironically enunciating themselves as *meaningful*, a canny alternative to the socially declarative option of just

leaving the theatre. With the ascendancy of full-evening dance works, where the opportunities to comprehend the magnitude of ignorance encapsulated within the world of a dance piece increase exponentially in relation to their duration, I usually tend to focus on the particular bodies that are embodying a work, rather than the work that is supposed to be embodied. To do this, I selectively hone in on the quality of a specific body's movement or the relations between different bodies or different body parts and let other aspects of the work simply drop away. Through this process of bracketing out the often-disturbing meta-world of the dance work, I can glimpse fragments of the worlds of the dancers—multiple and sometimes contradictory moments of presence, real relations, agency, and subjective connection to external phenomena and informed by different social and material histories. In other words, I prioritize the affective forms of particular lively bodies over the ideological form of a general body of work.

In *The Practice of Everyday Life* (1984), Michael de Certeau contrasts two opposing cultural “operational schemas”: “strategies,” which “produce, tabulate, and impose” spaces and are “rationalized, expansionist, centralized, spectacular, and clamorous” (31); and, “tactics,” which only “use, manipulate, and divert” spaces, and are characterized by “fragmentation,” “tireless but quiet activity”, and “quasi-invisibility” (31). According to de Certeau, every “strategic’ rationalization seeks first of all to distinguish its ‘own’ place, that is, the place of its own power and will, from an “environment” (36). The effects of this realization are:

1. “a triumph of place over time” that confers an “independence with respect to the variability of circumstances” (36).

2. “a mastery of places through sight” where “the division of space makes possible a panoptic practice proceeding from a place whence the eye can transform foreign forces into objects that can be observed and measured, and thus control and “include” them within the scope of its vision (36).
3. The creation of a “specific type of knowledge, one sustained and determined by the power to provide oneself with one’s own place” (36).

Reflecting on these multiple effects, I see connections to conventional theatrical dance works and to zoological exhibits; both partake in an “operational schema” that stages circumstances that ideally become independent from the “variability of circumstances” (36); both employ “panoptic practices” (36), which turn living bodies into objects that are observed, measured, controlled, and included within a specific vision; and, both create a “specific type of knowledge” (36) related to either a particular choreographer’s intentions or a particular zoological institution’s educational or conservational agenda.

It was my experience that, in spite of the frequent application of terms like *collaborator* and *interpreter* that attribute significant agency to performers, when I danced in other people’s choreographic work, I actually had very little real input about the conditions of my display, experienced a considerable restriction of my movement possibilities, possessed a limited understanding of whatever world I was inhabiting, and developed little to no vested interest in the larger pattern of meaning I was tasked with embodying or enacting. Faced with this situation, one in which I was, in relation to the choreographer, agentially “weak” (37), I employed particular *tactics* to endure my temporary captivity within the “space of the other” (37). Predominantly, these tactics were related to activating my own narratives during rehearsal and performance and recognizing



subjectively determined meaningful moments that ephemerally materialized on stage so that, regardless of the choreographically staged circumstances, I was present and engaged with articulating myself with the other bodies present in the work. In particular, I found myself homing in on qualitative aspects of movement or the relations that I perceived between myself and other living and nonliving bodies within the place of the choreography. This “maneuver within enemy territory” (37) enabled me to create a space where I could “play on and with a terrain imposed [...] and organized by the law of a foreign power” (37). Unlike the choreographer, who had the “option of planning general strategy” in order to situate me “within a distinct, visible, and objectifiable space” (37), I could only “accept the chance offerings of the moment and seize on the wing the possibilities that offer themselves at any given moment” and “make use of the cracks that particular conjunctions open in the surveillance of the proprietary powers” (37). De Certeau likens this maneuvering to “poaching,” an “art of putting one over on the adversary on his own turf, hunter’s tricks, maneuverable, polymorph abilities, jubilant, poetic, and warlike discoveries” (40).

Although the conditions and duration of their “performances” are in no way commensurable, I often saw the animals in front of me at the zoo as dancers. Like dancers, they had little choice about how they were displayed, experienced significant limitations imposed on their expressive and kinetic potentials, and probably possessed no interest in either the institutional goals of the zoo or the meaning their living bodies were intended to evoke in relation to other bodies. Flanked by often garish signage referring to an “original” habitat, a “natural” diet, and idealized “wild” behaviour, and positioned in a paradoxical setting that proselytizes about freedom by means of captivity and seeks to obscure evidence

of the immanent ecology zoo animals are part of with a vision of a transcendental ecology existing elsewhere, perhaps the animals at the zoo too were “making do” (35) as well; consciously consumed by their “consumption” (31) of their own narratives, and busy recognizing and creating their own meaning within the choreographies they were embedded in.

I started watching the animals at the zoo like the dancers I watched on stage and qualitatively focused on the bodies in front of me and their specific “maneuvers within enemy territory” (37). I hoped to gain an understanding and appreciation of them outside of the frames they were inserted into. Their bodies and actions often spoke to worlds beyond the zoo’s spectatorial frames—both to the natureculture of the zoo and its many actors, and to the worldly entanglements that in-formed their perceptive forms. By attending to the particular performances of the living forms in front of me, rather than on their prescribed roles within a staged scenario, and by denying the veracity of the zoological *Gesamtkunstwerk* by bracketing out its offensive meta-world, it was often possible for me to poach living beings at the zoo and be affected by a “whole creature” (Wheeler 2006) facing me, rather than the whole creature of the pseudo-scientific spectacle.

When work on *ARK* began I wanted to recognize the poaching I performed as a dancer, dance audience member, and zoo visitor, as well as the poaching that zoo animals performed in captivity. Although I was in a position of power and *strategically* organizing the work, I wanted the dance to be, as much as possible, about Danielle’s experience, so while performing she was informed not only by the work’s choreographic intentions, but also by her own experience, physical body, history, and knowledge. I wanted her to have input about the conditions of her display, a large degree of freedom in her movement

possibilities, an understanding about the world she was inhabiting, and a vested interest in the meaning she was embodying. In order to achieve these things, I changed significant things about the way that choreographers and dancers conventionally participate with one another and the methods by which dance pieces are assembled.

Before beginning the work, I asked for Danielle's consent and provided her with conceptual information in the form of Lingis's essay so that she would have agency, was informed about her participation, able to negotiate the terms of her engagement, and capable of engaging in oral, written, and kinaesthetic dialogues about the zoo and the choreographic work. After she digested the material, and tentatively agreed to the conceptual premise of the work, we visited the zoo together so that she could understand the structure of the place, have tacit knowledge about the animal bodies there, witness their subjective "poaching" of space, and form her own impressions. The diverse movement vocabulary of the work emerged exclusively from the coalescence of her experiential knowledge of a particular animal or group of animals and the contents of our oral and kinetic dialogue in the studio. Because each phrase operates as its own independently considered kinaesthetic plateau there was no need for her to be attentive to, or have allegiance to, any one particular mode of formal continuity or idealized kinetic bodily logos. Rather, since the choreographic vocabulary and 'style' was created from a collage of impressions, a certain discontinuity was always appropriate and welcomed. As Danielle experientially understood the place being invoked and because the structure of the piece recalled our walking path through the zoo, she could inhabit the space she was dwelling in on stage. When executing the work, her focus was not on the technical execution of a particular movement, but the experience of the *execution* of blending an indeterminate

choreographic phrase that we had created together with her current affective response to the sensorial image of that animal. If this blending caused the movement vocabulary to shift along certain bodily coordinates, then it was supposed to, as it was only a scaffolding set in place to enable the elaboration of her sensations. At no time was she asked to “be a particular animal,” but rather, to recall her own sensorial impression of a particular animal. Thus, she had no particular responsibility to create any consistent or holistic meta-meaning. The meaning of the work was her own narration of an iteration of her own experience, to the best of her ability. Additionally, the musical score for the work was created after the completion of the work and was intentionally structured to allow Danielle to have a flexible and open relationship with the auditory components of the score, rather than a fixed and determinate one. During execution of the work, while she had definitely assigned herself musical landmarks, she prioritized her own experience of movement rather than the perfect replicability of a past performance or the attainment of an idealized or authentic performance. Correspondingly, as time progressed, although I was always present to witness the dance and to face her afterwards, my comments became oriented towards recognizing issues with the structure of the work, rather than around her performative expression, or her execution of the vocabulary, as those were her territory. Asked to reflect on her experience, Danielle offers these comments:

Most choreographers ask dancers to manifest movement the choreographer has envisioned or has made on him/herself. There is an act of transference from the imaginative or physical world of the choreographer to the body of the dancer. As a result, there is a lot of guess work involved for the dancer in trying to interpret a choreographer's creative vision. Jonathan's general approach is extraordinarily

unique in that the material for each piece is drawn from a common source of reference. I do not guess at how Jonathan saw the swoop of a Carolina wood duck's neck feathers—I saw it with him. A shared ownership of the work has therefore begun before even entering the studio, allowing us to work in a non-hierarchical manner. As a dancer I find this process incredibly liberating and am able to enter into each moment of performance with a commitment and lack of questioning that I have been searching for the entirety of my career. (Baskerville 2019)

Because of these choreographic choices, it was hoped that an audience member was confronted with a work that emphasized opportunities for poaching and privileged individual interpretation rather than the absorption of a unified idea or a singular meaning. The composition and contents of the work do not ask that an audience member focus on remembering specific patterns, recognizing iconic forms, or recalling particular phrases, but rather on noticing the variability of animate forms, appreciating differences, witnessing an affective mode of execution, and accepting change. Audience members are expected to create their own narrative to explain or understand what they are watching rather than discover a predetermined one, or, even better, to forego with narrative altogether. With the absence of a specific lighting design that focuses on specific moments and demarcates specific areas combined with the presence of an overlapping score with multiple points of musical reference at any particular time, an audience member is free to practice a subjective mode of consumption by looking where they choose and apprehending any rhythmic connections that they might witness from their unique perspective. However, by identifying the zoo as the inspiration for the project, and by alluding briefly to the compositional and structural origins of the work within the program audience members

received, *ARK* leverages one performative function of de Certeau's tactics related to a prospective viewer's relationship to, or perception of, a specific site: "a tactic boldly juxtaposes diverse elements in order suddenly to produce a flash shedding a different light on the language of a place and to strike the hearer" (de Certeau 1984 37-38).

In Jorge Luis Borges's work "The Analytic Language of John Wilkens" (1981 [1952]), a fictional animal taxonomy entitled "The Celestial Emporium of Benevolent Knowledge" is referenced. In this fabulous taxonomy animals are separated into the categories of:

a) those that belong to the Emperor, (b) embalmed ones, (c) those that are trained, (d) sucking pigs, (e) mermaids, (f) fabulous ones, (g) stray dogs, (h) those that are included in the present classification, (i) those that tremble as if they were mad, (j) innumerable ones, (k) those drawn with a very fine camel-hair brush, (l) others, (m) those that have just broken a flower vase, (n) those that resemble flies from a distance. (142)

In *The Order of Things* (2002 [1970]), Michel Foucault states the importance of Borges's taxonomy to the genesis of his intellectual project of interrogating the logic of classification schemes, as his:

book first arose out of a Borges passage, out of the laughter, that shattered, as I read the passage, all the familiar landmarks of my thought—*our* thought, the thought that bears the stamp of our age and our geography—breaking up all the ordered surfaces and all the places with which we are accustomed to tame the wild profusion of existing things, and continuing long afterwards to disturb and threaten with collapse our age-old distinction between the Same and Other. (xvi)

According to Foucault, this particular taxonomy demonstrates "the exotic charm of another system of thought" and the "limitation of our own, the stark impossibility of thinking *that*" (xvi).

Furthermore, the taxonomy awakened in Foucault the “suspicion” (xix) that there “is a worse kind of disorder than that of the incongruous, the linking together of things that are inappropriate” (xix). This kind of disorder is the heterotopia, a “disorder in which a large number of possible orders glitter separately” and “things are ‘laid,’ ‘placed,’ ‘arranged’ in sites so very different from one another that it is impossible to find a place of residence for them, to define a common locus beneath them all” (xix). In contrast to the utopia, which “consoles” and “although they have no real locality there is nevertheless a fantastic, untroubled region in which they are able to unfold; they open up cities with vast avenues, superbly planted gardens, countries where life is easy, even though the road to them is chimerical” (xix), heterotopias disturb

because they undermine language, because they make it impossible to name this and that, because they shatter or tangle common names, because they destroy ‘syntax’ in advance, and not only the syntax with which we construct sentences but also that less apparent syntax which causes words and things (next to and also opposite one another) to ‘hold together’ (xix).

Whereas utopias “permit fables and discourse,” heterotopias “desiccate speech, stop words in their track, contest the very possibility of grammar; they dissolve our myths and sterilize the lyricism of our sentences” (xix).

Examining *ARK* in relation to the structural practices of both dance and zoos—practices that permit fables and discourse—which in turn create worlds that are sometimes imagined as utopic in their dimensions, it seems appropriate to apply the term heterotopia to the work.

Although partially tethered at the level of vocabulary to the organizational schematics of the body typologies of dance that Danielle and I have been “inscribed” (Ness 2008) by, and at the level of structure to zoo typologies, the focus on Danielle’s subjective experience of animal

bodies disrupts different orders that produce meaning. Or, perhaps more accurately, it interrogates the lucidity of the order by which the zoo organizes animal bodies according to certain criteria, and by which dance organizes human movement according to certain criteria; its discordant and disruptive evocations of perceptions of normally recognizable animals do not obey the criteria that would allow them and the zoos classification schematic to be recognized.

The approach devised for the creation of *ARK* bears more than a passing similarity to another Borges work entitled “Funes the Memorius” (1964). In the short story, the narrator recalls his experiences with Ireneo Funes, a man who, after a riding accident, remembers everything that he experiences. This change in his perception is described as significant, for, before his accident he “had lived as one in a dream: he looked without seeing, listened without hearing, forgetting everything, almost everything” (Borges 63), but afterwards “the present was almost intolerable in its richness and sharpness: as were his most distant and trivial memories” (63). Over the course of the story, the narrator devotes considerable attention to attempting to describe Funes’s “vertiginous world” (65):

A circle drawn on a blackboard, a right triangle, a lozenge—all these are forms we can fully and intuitively grasp; Ireneo could do the same with the stormy mane of a pony, with a herd of cattle on a hill, with the changing fire and its innumerable ashes, with the many faces of a dead man throughout a long wake. I don’t know how many stars he could see in the sky. (64)

According to the narrator, Funes’s mode of cognition, one which focuses on the particular differences between things, rather than on particular similarities between them, was an understanding devoid of or “almost incapable of ideas of a general, Platonic sort” (65). The result of this perception of the world was “a certain stammering grandeur” (65), but also an



entity “not very capable of thought,” for to “think is to forget differences generalize, make abstractions. In the teeming world of Funes, there were only details, almost immediate in their presence” (66).

A particular passage of the work is indicative of the critical stance towards evoking our experiential encounters with the animals at the zoo: “Not only was it difficult for him to comprehend that the generic symbol *dog* embraces so many unlike individuals of diverse size and form; it bothered him that fact the dog at three-fourteen (seen from the side) should have the same name as the dog at three-fifteen (seen from the front)” (65). Another passage is indicative of Danielle’s conceptual position within the work: “He was the solitary and lucid spectator of a multiform, instantaneous world and almost intolerably precise world” (65). Another passage indicates the challenge that the piece poses to Danielle when performed multiple times: “In fact, Funes remembered not only every leaf of every tree of every wood, but also every one of the times he had perceived or imagined it” (65). And, one additional passage is indicative of a potential response that might be elicited from an audience member with strong opinions about dance as a language: “I was benumbed by the fear of multiplying useless gestures” (115).

After reading much of the literature critiquing zoos, literature predicated on the ability to order and classify and thus to “forget differences generalize, [and] make abstractions” (66) from subjective experience, I am content to classify myself, and my dance works, and perhaps even my research as “not very capable of thought” (66). If the production of academic meaning, or the production of dance meaning for that matter, means *only* developing certain techniques that are, as Max Frisch put it “the happy knack of so arranging the world so that we don’t experience it” (as cited in Payne 2003 532), I would like to consciously orient myself in a different direction. *Homo faber*, the concept that humans control the world through their tools, and by extension,

construct their world through words, actions, ideas, and art, rather than being one of its many subjects, is an idea, that while obviously *contributing* directly to the emergence of a period now popularly termed the Anthropocene, might be viewed as having a less secure place in the ideas, artworks, or experiential encounters that might *mediate* its unfolding meaningfully.

## **INVISIBLE BODIES**

*The zoo is an affirmation of appearances and an identification of all life with appearances. But a critique that grasps the zoo's essential character reveals it to be a visible negation of life—a negation that has taken on a visible form.*

revision of text from Guy Debord's *Society of the Spectacle* (1994 [1967])

In *What Would Animals Say If We Asked the Right Questions* (2016), philosopher Vinciane Despret observes that in ethological literature, references to the bodies of ethologists [...] are not very numerous; when they do appear, they are for the most part only briefly mentioned and usually in the form of a practical problem to be solved. And yet one finds in some of them, either explicitly or implicitly, a story in which their bodies will be actively mobilized in a particular form, namely that of a mediating device. (Despret 15)

Barbara Smuts's ethological work with baboons in Gombe National Park, as analyzed by Donna Haraway in *When Species Meet* (2008), is offered by Despret as an example of animal research mediated by the human body. Within this narrative, Smuts initially attempts to perform her work "as she had been instructed: so as to habituate the animals to one's presence, one has to learn to approach them gradually. To not unduly influence them, one must act as if one is invisible, as if one is not even there" (Despret 15). According to

Haraway, Smuts was supposed to “be like a rock, to be unavailable, so that eventually the baboons would go on about their business in nature as if data-collecting humankind were not present” (Haraway 23-24), because, as Despret explains, good “researchers were those who, by learning to be invisible, could observe the natural scene up close” (Despret 16).

Despret describes this process as one, that, as Smuts learned, “is often doomed to fail [...] because it is based on the idea that baboons will be indifferent to indifference” (16) and ignores the reality that “the only creature who believed in the so-called scientific neutrality of being invisible was Smuts herself, for ignoring the social cues of the baboons was anything other than neutral” (16). Despret asserts that this issue arises from the way that humans and animals are *conceived* of during the research, a situation in which “the researcher is the one that poses the question, and they are often a far cry from imagining that the animals themselves may be posing just as many questions of their own” (16). Smuts’s resolution to this situation came in the form of a bodily shift with choreographic implications in which “she adopted the behavioral style similar to that of the baboons, adopted the same body language as them” (16). Despret is skeptical of Haraway’s interpretation of this situation and its “romantic” exemplification of “embodied communication” between species that is about “learning to respond and to be respondent, to be responsible” (17). Despret states that it is only one possible interpretation of Smuts’s experience. In contrast, she forwards the notion of it being an “empirical and speculative” “outline” “of what sociologist Gabriel Tarde calls an interphysiology, that is, a science of the *agencement* of bodies” (17). According to Despret, from this perspective, the body “becomes the site of what can affect and be affected” and “underlines” the

possibility of becoming not exactly the other through metamorphosis but *with* the other, not in the sense of feeling what the other is thinking or feeling for the other like a burdensome empathizer but rather of receiving and creating the possibility to inscribe oneself in a relation of exchange and proximity that has nothing to do with identification. (17)

Despret's analysis offers an avenue to reflect on the staging of the zoo through her focus on how conceptions of humans and animals affect both interpretations of animals and relationships with animals. One of the zoo's primary agendas, as many zoological theorists have observed, is to, through primarily cultural means, stage animals as members of natural species (Mullan and Marvin 1987; Lee 2005; Desmond 1999; Warkentin and Fawcett 2010). Thus, the intention of the zoo is to create a situation where the ideal zoo visitor becomes, like the ideal animal researcher, *invisible*, able to "observe the natural scene up close" (16) and to see animals "go on about their business" (Haraway 23-24).

Consequently, visitors will be able to gather the *data* that leads towards understanding a zoo animal as a member of species. Ideally, captivity at the zoo does not affect the experience of experiencing animals, nor does it affect the experience of the experience of being an animal. Ideally, the animal becomes *habituated* to human presence and does not respond, and in turn the human animal becomes *habituated* to the environment of the zoo, and likewise, does not respond. Essentially, the zoo attempts to mediate human and animal bodies so that is not seen as mediating—or at least so that its mediation gestures towards a "scientific neutrality" (Despret 16) where human and animals exist unaffected by "relation[s] of exchange or proximity" (17).

The capacity to participate in this institutional illusion was one of the first casualties of my extended exposure to the Toronto Zoo and the result of the collusion between a diet of critical zoological literature and a physical regiment of experiential encounters with the embodied social cues of human and nonhuman animals that indicated the zoo's staging "was anything other than neutral" (16). On each and every visit I observed indications that human and nonhuman animals were, rather than wholeheartedly participating with the zoo's staging, continually *posing questions* to the zoo's institutional vision through their choreographic relations with one other and the space of the zoo. Examples of this include children and adults vocalizing towards the animals, gesturing towards the animals, creating noise through the use of keys, hands, or feet on the barriers that separated animals from people, and beckoning or chasing animals that were in the open areas where human and animal bodies intermingled. Likewise, animals themselves would sometimes actively engage with people through looking directly at, approaching, or even making contact with the *invisible* human visitors. More frequently, *habituated* animals would indicate towards the real ecology of the zoo, as they would gaze beyond the borders of their "habitat," wait at their enclosures' "invisible" doors in expectation of immanent feeding, move in response to the sounds they heard "backstage," or maneuver, not just within an enclosure, but along its "impermeable" borders. Sensational news stories about people intentionally or accidentally, entering "animal" spaces at zoos and animals intentionally or accidentally exiting "animal" spaces—entrances and exits that often result in death or injury to humans and animals, are magnifications of more benign pedestrian zoo tendencies (Barnett 2009; Dell'Amore 2012; McCurry 2012; Messenger 2014; Goldberg 2016; Jacobo, 2016; Worland 2017; Crespo 2018; Gajanan 2018). When these occur, they are spectacular

embodied *questions* to the performances of invisibility proscribed by zoological institutions.

In *Body, Movement and Culture* (1992) dance ethnographer Sally Ann Ness writes about the way that choreographies that make “the invisible visible” (12). In articulating this idea, she states that this process

involved the human body not as an object per se, but as a means, or *figure* for revealing something else: the dynamics, present but otherwise invisible, of the world in which a person or several people moved. Choreography is not just something that is “set” on somebody’s body. It is also something that occurs “in a space.” It is something that happens in and to a certain area of the world. (12-13)

Rearticulating her idea to suit a multi-species context, the immanent choreographies at the zoo reveal the real dynamics of this multispecies space. Rather than being choreographies of indifference, the social cues of humans and animals at the zoo reveal an awareness of the other, the presence of foreign biological and material bodies, the reality that both humans and animals are in indeed in relations of “exchange and proximity” (Despret 17), and, a multispecies desire to affect and be affected.

In “The Future and Ethics of Zoos” (2007), zoo director, zoological designer, author, and advocate of immersive design practices David Hancocks outlines the current and pressing need for a new type of natural history institution. Reflecting on contemporary human ignorance towards the natural world cemented by urban lifestyles, the mandate of this new institution is to “create a citizenry with a better knowledge base, a greater sense of compassion, a stronger commitment to care, a deeper sense of connection to the world of nature; and a fuller understanding of our place in it” (1). Although Hancocks critiques contemporary zoological

institutions because of “their deep conservatism, their general lack of intellectual and scientific rigor, and, in the past two decades, their lurch towards a corporate mentality with an intensifying focus on attendance statistics and entertainment” (2), he also states that “zoos may have better capacity to change than any other natural history institution” because they “could absorb the specialist components covered by aquariums, botanic gardens, natural history museums, even science centers, whereas those institutions could not develop a collection of live animals to any notable degree” (2). While his suggestions for zoos are in fact multiple, one of the primary components of his vision is a commitment to a design trajectory involving more elaborate immersive practices so that animals and humans are situated in zoological environments of ever-increasing ecological verisimilitude, or in other words, illusion.

According to Hancocks, more elaborate immersive zoo environments benefit both humans and animals. Immersive designs based on natural models maximize animals’ “ability to carry out natural behaviors in large and complex natural spaces, amidst landscaping and terrain sufficiently varied to hide from each other or from the public if they wanted to” (2). Similarly, immersive designs based on natural models enhance human’s “sensory, esthetic, and intellectual involvement with the habitat” (2) because “if they were immersed in a habitat and simultaneously saw animals from that habitat, they would form a subconscious connection between the two; they would better comprehend that losing a habitat meant losing its animals” (2).

Although I would agree that all the animals at the zoo, without exception, could benefit from better “quality quantity of space” (3), and that the zoo environment would be a more pleasant space without signs of conspicuous commercial consumption, I am skeptical of future zoo designs that desire to mediate their own fabricated ecology through performances of

invisibility—performances that are continually rejected by both human spectators and nonhuman inhabitants. The need for animals to appear habituated would increase under this design format, as would the need for humans to continue to perform a scientific invisibility. Presumably, the zoo’s actual mechanics, bodies, technologies, and training regimes would recede further into the artificially engineered landscape as the animals continued to be evoked, not as individuals living in a complex negotiated multispecies space, but as representatives of an imagined space somewhere else, or as transitional figures that educated spectators about “deep time, extinction, and evolution” (4).

Perhaps the zoo, while still deliberately increasing the quality of animal’s lives, could actively reframe itself as the interphysiological space *that it already is*—to let spectators of the zoo witness its spectacular “real” choreography—its “*agencement of bodies*” (Despret 17). While the opportunity of “inscribing of oneself in a relation of exchange and proximity which” has “nothing to do with identification” (17), more often than not is one that *needs* to be denied to spectators and zoo animals for reasons of human and animal safety, these relations are present in abundance at the zoo in the manifold relationships existing between animal caretakers and their multispecies charges. These relations articulate anything but indifference to indifference. They are actually focused on responding to difference as zookeepers are institutionally tasked with, and emotionally invested in, understanding and navigating the significant differences between species and the significant differences between individuals of a particular species. In their performance of these tasks, zookeepers’ bodies are actively mobilized as mediating devices within choreographies enacted on different scales, utilizing different technologies and different techniques, in different contexts, and different dimensions of contact. Although there are



exceptions, these caretakers, except when performing short public relations talks, perform the majority of their duties out of the public eye, invisibly preserving the prescriptive illusions the zoo works so hard to summon.

While perhaps invisible to casual spectators, these human animals are overwhelmingly present in the worlds of zoo animals—one needs only to watch zoo animals otherwise properly *habituated* respond to the sound of their multiple keys jangling, or to the sight of them near their enclosures. In these instances, the theatrical illusion of human invisibility and a pseudo-scientific neutrality is compromised, as nonhuman animals reveal themselves to be, not natural specimens or scientific figures, but animate subjects. They are part of a complex cultural world in which they live along with human animals, perhaps not always responsibly, but *responsively* “with the other” (17).

The zoo, as Hancocks indicates by acknowledging its adaptive possibilities, is already a hybrid institution. Rather than attempting to create increasingly sophisticated illusions of pure nature, the zoo could, like Smuts, enact a bodily shift with choreographic implications, and embrace its own “hybrid nature” (Bulbeck 90). Immersive design formats that have been demonstrated to improve animal quality of life through increased opportunities for animal movement could be *complemented* by architectural interventions that allow more of the zoo’s interspecies agencement of bodies to be revealed and clearly apprehended. A zoo of hybrid nature, one which foregrounds the interphysiological relations between humans and nonhumans, would necessarily change form, as it recomposes itself to reveal real bodies rather than refer to absent ones. Although still alluding to a world outside of itself, the lively choreographies of living animal subjects would be foregrounded, rather than the more static choreographies of abstracted animal life.

Spectators would, while perhaps not themselves having any more direct contact with the bodies of animals, be able to witness real human bodies, bodies similar to theirs, responding to and articulating with animals in “relations of proximity and exchange” that have “nothing to do with identification” (17). While these spectators’ own invisibility to animals potentially might increase under these circumstances, as animals are given the freedom to respond to their real conditions, the overall invisibility of zoological practices would diminish.

A zoo of hybrid nature would also be pharmakon for resolving pernicious arguments that plague zoological literature and place education and entertainment in opposition to one another. Within these arguments a zoological education is equitable with absorbing the pedagogical aspirations of the zoo, and zoological entertainment is equated with only senseless rather than sensible “fun.” In *Zoos: A Philosophical Tour* (2005), Keekok Lee concludes her ontologically focused study that positioned zoo animals as only living artefacts of human culture with the following statement, a statement that while refreshing on a particular level, also reifies a particular type of logic that segregates and orders knowledge and experience in a particular fashion and along certain coordinates:

It may well turn out that ordinary zoo visitors are more insightful about the true nature or ‘essence’ of zoos than the noble-minded advocates of such institutions in the name of education-cum-conservation. It is no wonder that such missionary zeal, on the whole, leaves them unaffected and passes them by—rightly, they concentrate on what they have come to zoos for, namely, to see and be amused/entertained by live exotic animal exhibits in pleasant naturalistic simulated enclosures. Good wholesome recreation and fun to be had by one and all in the family. This is not to

be sneered at, especially when the satisfied customers appear not to have been taken in by the zoos' own mistaken and misleading spiel that the animals they exhibit are wild. (117)

A zoo of hybrid nature, one which “attempts to dissolve such stark oppositions, to combine management and awe, mind and heart, and even, where necessary, nurture and conquest” (Bulbeck 90), would also work towards dissolving stark persistent oppositions between education and entertainment—where education is positioned as divine and elevated while amusement is positioned as crude and base in intent. Perhaps, under hybrid conditions, visitors could finally leave the zoo as amused and informed participating members of “a citizenry with a better knowledge base, a greater sense of compassion, a stronger commitment to care, a deeper sense of connection to the world of nature; and a fuller understanding of our place in it” (Hancocks 1).

## **PUNCTUATED PLATEAUS**

An account of the evolutionary theory of punctuated equilibrium was first published in 1972 by paleontologists and biologists Niles Eldridge and Stephen J. Gould in the paper “Punctuated equilibria: an alternative to phyletic gradualism.” Their controversial theory contested the reigning evolutionary paradigm that “new species arise from the slow and steady transformation of entire populations.” Instead, they suggested that “new species arise very rapidly in small, peripherally isolated local populations,” and thus that the “history of evolution is not one of stately unfolding, but a story of homeostatic equilibria, disturbed [...] by rapid and episodic events of speciation” (84). Eldridge and Gould’s evolutionary intervention was theorized through their close dialogue with the fossil record, and they foregrounded the fact that gradualist evolutionary theories could not explain the

“breaks” in the fossil record because, under a gradualist paradigm, “we ascribe all breaks to imperfections” (84). If punctuated equilibrium is possible, and a “new species does not evolve in the area of its ancestors; it does not arise from the slow transformation of its forebears. Many breaks in the fossil record are real” (84). Consequently, the “history of life is more adequately represented by a picture of ‘punctuated equilibria’ than by the notion of phyletic gradualism” (84).

In the book *Punctuated Equilibria* (2007) Gould considers his theory of punctuated equilibria as conceptual model to interpret the rhythms and patterns of his personal learning. He states:

If relatively prolonged periods of actively maintained stability, followed by episodic transition to new positions of repose, mark the most characteristic style of change across nature’s scales, and if we have generally tried to impose a gradualistic and progressivistic model of change upon this different reality, then we must often face anomalies that engender confusion and frustration in our personal efforts to improve our lives or to master some skill. (271)

Citing “mundane examples” from his early experience including “fruitless years learning to play the piano” (271), Gould relates that it was only later in his life that he could

conceptualize the possibility that plateaus of stagnation and bursts of achievement might express a standard pattern for human learning, and that my previous frustration (at the long plateaus), and my exhilaration (at the quick and rather mysterious bursts), might only have reflected a false expectation that I had carried so long inside my head— the

idea that every day, in every way, I should be getting just a little bit better and better.

(272)

Considering the discontinuity between his expectation and his experience, he suggests “that a general recognition of the principles of punctuational change” emphasise that

learning generally proceeds through plateaus of breakthroughs, and that important changes in our lives occur more often by rapid transition than by gradual accretion— might provide some distinct service in our struggles to fulfill the ancient and honorable Socratic injunction: know thyself. (272)

Although I was aware that punctuated equilibrium was a *scientific* theory meant to explain change within populations of species that manifest over geological durations, I often contemplated it as a means to make sense of the way that my abilities, senses, and coordinations *evolved* during my dance training. My body eluded both my own expectations and my professional itinerary. Rather than gradually gaining new abilities, sensations, and coordinations on a predictable basis, it was my experience that, I would endure rather long periods of time in some sort of frustrating stasis. Change would invariably come, but when it did, it was both unexpected and unpredictable. In one rapid moment, I would be composed differently and was possessed by a different perception of myself that extended out into the space around me. With this new form, certain patterns of actions were instantly available to me, but interestingly, old patterns, if I tried to access them for one reason or another, rather than being easily deployed, were either wholly inaccessible or required significant attention to articulate. These often-long periods between significant change were recognized by my instructors and referred to as *plateaus*.

In *A Thousand Plateaus* (2011 [1987]), philosophers Gilles Deleuze and Felix Guattari, state that:

A plateau is always in the middle, not at the beginning or the end. A rhizome is made of plateaus. Gregory Bateson uses the word “plateau” to designate something very special: a continuous, self-vibrating region of intensities whose development avoids any orientation toward a culmination point or external end [...] We call a “plateau” any multiplicity connected to other multiplicities by superficial underground stems in such a way to form or extend a rhizome. (21-22)

In the translator’s foreword, Brian Massumi states that a plateau:

is an orchestration of crashing bricks extracted from a variety of disciplinary edifices.

They carry traces of their former emplacement, which give them a spin defining the arc of the vector. These vectors are meant to converge at a volatile juncture, but one that is sustained, as an open equilibrium of moving parts each with its own trajectory. (xiv)

Deleuze, Guattari, and Massumi employ particular words and assemblages of words that allude to my interpretation of bodies at particular time as *plateaus*. The “orchestration of crashing bricks extracted from a variety of disciplinary edifices” (xiv) is the collection of particular experiences of any particular person that converge in the “volatile juncture” (xiv) that is the moving body at any particular time. The plateau, although conceptualized under training regimes as a *preparatory* place on the route to a teleological destination, is perhaps more adequately understood as a “sustained” moment of “open equilibrium of moving parts” (xiv) that seeks to maintain its particular heterogenous integrity rather than be transcended. Thus, the frustration of a plateau is the perception of conflict within a body that is “always in the middle,” a “continuous,

self-vibrating region of intensities” that “avoids any orientation toward a culmination point” and is inserted into a homogenizing system with an “external end” (21-22).

Following Massumi, these systems of consistency that a body finds itself in frustrating dialogue with would themselves also be plateaus, as they are “the holding together of disparate elements (also known as a ‘style’)” (xiv). Thus, particular dance techniques are both a “mode of composition” and “punctual events” that try to “reconstitute a dynamism that has existed in other mediums at other times” (xiv). Their particular punctuation “corresponds to the point at which that particular dynamism found its purest incarnation in matter, the point at which it was freest from interference from other modes and rose to its highest degree of intensity” (xiv). As in Gould’s evolutionary theory, characterized by its focus on significant and relatively rapid formal ruptures and breaks, for Massumi, an aesthetic punctuation “never lasts more than a flash, because the world rarely leaves room for uncommon intensity, being in large measure an entropic trashbin of outworn modes that refuse to die” (xiv).

Visiting multiple zoos around the world and witnessing iterations of Jane Desmond’s “history of exhibitionary styles” (1999 160) that could be thought of, rather generously, as examples of largely “outworn modes that refuse to die” (Massumi xiv), I wonder when and how the next punctuated “animal epiphany” (Marchesini 2017) to the body of the zoo will manifest. As Nigel Rothfels observes in *Savages and Beasts: The Birth of the Modern Zoo* (2002), there are two main groups that “have developed around the issue of the significance of zoological gardens” (22): one in which the “gardens of the nineteenth and twentieth centuries represent a genuine interest in the animals expressed in a desire to learn about them” (22), and the other, which has “sought the persistent presence and development of certain social, political, and economic forces behind all collections of animals” (22). Despite their differences, they both

evoke narratives of cultural gradualism, articulated in relation to particular moral orientations informed by scientific information, in order to speculate about the future of zoos. To me, both of their narratives recall Gould's erroneous "idea that every day, in every way, I should be getting just a little bit better and better" (2007). The first group imagines, that because of gradually developing scientific understandings of animals, the form of zoos will gradually change in order to function as a better (more authentic) place for animals. The second imagines that because of developing scientific understandings of animals, zoo function will gradually change in order to form a better (more humane) place for animals. In either case, the "self-vibrating region of intensities" (Deleuze and Guattari 21-22) that are historically situated animals, are swept away into a flood of teleologically-driven narratives issuing from opposed systems of thought fixated on the *external end* of understanding animals in particular ways authorized and authenticated by science.

In "Flying Penguins in Japan's Northernmost Zoo" (2019), Japanese historical and cultural scholar Takashi Ito outlines the Asahiyama Zoo's departure from zoological philosophies that stress scientifically informed staging of animals or the humane treatment of animal beings. Instead of immersion (Hancocks 2001), or welfare (Acampora 2010; Margodt 2010; Kemmerer 2010), the Asahiyama Zoo promotes a zoological concept called "animal-in-action exhibit" (Ito 246), a term that Ito plays with as he explores the multiple ways that animals are *activated* within the zoo's boundaries. These activations include: the exhibition of a herd of Ezo deer and the serving of venison from Ezo deer in the zoo cafeteria (343-244); the posting of handwritten informational signs that "might give the impression of being 'unscientific' and 'unprofessional'" (252) that encourage interspecies identification and interpretations of animals as "cute or winsome" (248); the display of portraits of deceased animals within their former



cages along with handwritten notices that say “amidst mourning” (258), and, perhaps most significantly, the creation of exhibits like the *Penguin Museum* and *Seal Museum* that showcase opportunities for dynamic animal movement.

Ito identifies the human force behind the “animal-in-action” concept as Masao Kosuge, the former director of the Asahiyama Zoo. Ito explains Kosuge’s design philosophy is one: in which “when appropriately controlled, the visibility of human observers is a source of entertainment” for animals (252); “encourages animals to reveal their own characteristics in proximity to observers” (247); and, focuses on experiences with “lively animals in the closest possible proximity,” so that viewers “better appreciate their beauty and vitality” (247). According to Ito, Kosuge’s philosophy emerges out of his career as “the veterinarian of the Asahiyama zoo” where he learned that

each zookeeper develops a ‘personal relationship’ with an animal of which they take care every day, and can thus ‘think’ in the same way the attended animal does.

Zookeepers sense that different animals have their own forms and behaviours that constitute the intrinsic part of what they are. (253-254)

Ito argues that this idea is not a reiteration of a “modernist approach” (254), does not represent an “animals ‘otherness’ as opposed to the human ‘self,’” and encourages a “process of becoming” (255) particular animals—an “irrational dream that the Enlightenment-model zoo would despise” (256). Foregrounding opportunities for literal and embodied consumption, personal identification, and zoomorphism, which complicate, rather than clarify the “human animal boundary” (259), Ito identifies the Asahiyama Zoo as a space underpinned by an intersubjective “affective architecture” (259).

Perhaps it is worth considering the different iterations of this affective architecture as emerging plateaus of zoological thought prompted, not by intellectualized ideas of generalized animals imagined existing elsewhere, but through embodied experience with the specific captive animals that a keeper is faced by and responds to. In the conclusion to his essay, Ito discusses the indeterminacy of the omnipresent zoo's motto "to communicate [the importance] of life" (clarification author's) as it does not specify "who shows the importance of life to whom" (259).

In "A thousand ecologies" (2009) philosopher Ronald Bogue synthesizes aspects of *A Thousand Plateaus* and Felix Guattari's *Three Ecologies* (2000 [1989]) and states "if thought may unfold across a thousand plateaus, there are a thousand ecologies that would unfold within those plateaus, a thousand ways of attempting to create a new collectivity and a new earth" (55). Reflecting on the animal spaces of the Toronto Zoo and Berlin Zoologischer Garten, vis a vis my bodily experience and its effects on my own choreographic practice and emergent understanding of myself, I recognize almost 1000 kinaesthetic plateaus emanating from each animal's articulation with the assemblage of human bodies, materials, and information that functions to form an iteration of an Anthropocenic ecology—what amounts to its "house, domestic property, habitat, natural milieu" (Herzogenrath 2009 5). Considered individually, each offered a radically new way for Danielle and I to think about our bodies, and our bodies' interaction with space that complicated the external ends of the dance practices we had been inscribed by. Is it possible that lying within each of the zoo's multiple plateaus there are opportunities to engage with human and nonhuman thought unfolding along different coordinates? By foregrounding animal movement and appealing to animals' performative inclinations as the means to fundamentally structure an exhibit and by encouraging affective entanglements, perhaps the Asahiyama Zoo is

tentatively puncturing the anthropocentric equilibrium of a certain zoological intellectual ecology and sensing animals' incessant punctuation of it.

From the perspective of a dance practice, as I understand it, in order to move differently, it is necessary to have the opportunity to perceive differently. It might follow that, in order for people to perform differently towards animals, it may also be necessary for people to have opportunities to perceive animals differently—not only by being told certain things that are determined and fixed in place by specialists, but also through subjective relations and encounters with dynamic bodies. The value of prevailing zoological paradigms that operate from certain assumptions may be of limited value for reimagining the possibilities at the zoo or for visualizing the evolution of future relationships with animals. For, as Eldridge and Gould state: “expectations of theory color perception to such a degree that new notions seldom arise from facts collected under the influence of old pictures of the world. New pictures must cast their influence before facts can be seen in different perspective” (1972 83).

## **ETHNOGRAPHIC ETHOLOGIES**

*The elephant came up to me very slowly and stood over me, not with his legs over me, but with his head—that great head bending down toward me and those wonderful eyes looking into mine. We went on like this, staring at each other, for what seemed like a bit of forever. Then he turned, shuffled back, and just went off into the jungle with his tail swinging. He did not touch me. I felt that in some way I had met a person or a friend, somebody out of my past it was a very awesome and treasured experience. The very walk, the back of the elephant, the thin swinging tail, those flapping great ears. It was a creature from another world, and so are all the creatures in the imagination of our minds.*

Martha Graham, *Blood Memory* (1991)

*Unable to shake my despairing mood, I took Safi to the woods, hoping this would cheer me up. For a while, we played fetch with sticks in the river, her favourite game. Yet soon she refused to go after the stick, which was unheard of. I kept trying to entice her to play, but she just stood in the water looking at me. Finally, she moved to an island in the stream, about thirty feet from the bank where I stood, and lay down facing me. Her penetrating gaze caught my attention, and I sat down to face her. She held her body*

*completely still and continued to hold my gaze. Looking into her eyes, my body relaxed. Her face became the world, and I seemed to fall into her being.*

Barbara Smuts, *Encounters with Animal Minds* (2001)

I first read Donna Haraway's account of Barbara Smuts's work in *When Species Meet* (2008) while writing my master's thesis and was enthralled. Eventually, I encountered Smuts's work, in the form of the essay "Encounters with Animal Minds" (2001). It was an article that posed questions you me about the potential of leveraging conceptions of kinaesthetic empathy articulated in dance studies contexts across species lines. These questions, in turn, were one of the many spurs that lead to the creation of *ARK*. In her beautiful essay, which is explicitly situated as a departure from a more analytic scientific professional persona, Smuts outlines particular opportunities she has had to develop interspecies relations with animal communities and individuals of different species. On my initial readings of her work I was fascinated by both her descriptions of her unorthodox embodied approach and the profound consequences it had for her understandings of baboon society. According to Smuts:

When speaking about this process at professional gatherings, I've used the accepted scientific term, 'habituation.' The word implies that the baboons adapted to me, that they changed, while I stayed essentially the same. But in reality, the reverse is closer to the truth. The baboons remained themselves, doing what they always did in the world they had always lived in. I, on the other hand, in process of gaining their trust, changed almost everything about me, including the way I walked and sat, the way I held my body, and the way I used my eyes and voice. I was learning a whole new way of being in the world—the way of the baboon. I was not literally moving like a baboon—my very

different morphology prevented that—but rather I was responding to the cues that baboons use to indicate their emotions, motivations and intentions to one another, and I was gradually learning to send such signals back to them. As a result, instead of avoiding me when I got too close, they started giving me very deliberate dirty looks, which made me move away. This may sound like a small shift, but in fact it signalled a profound change from being treated as an *object* that elicited a unilateral response (avoidance), to being recognized as a *subject* with whom they could communicate. (295)

Smuts's embodied approach to animal research "proved immensely useful" (295) to her research and enables her to experience "critical aspects of baboon society" (295). For instance, she learns "that baboons' most basic social conventions entail acknowledgement of relative status through respect for personal space" (295), that each "baboon had an invisible circle around them" (295), that "boundaries of personal space could shrink and grow" (296) depending on circumstances, and, that "ignoring the proximity of another baboon is rarely a neutral act" (297). Smuts's gradual understanding of baboon personal space, embodied gestures, and social cues also enables her to understand their collective uses of space and their societal rhythms as her routine became "identical to theirs" (298) as she "walked wherever they did" (295-296) and "rested when and where they rested" (296). In another section of the work, Smuts leverages her animal understandings towards the suggestion of a generalizable performative approach to take with animals:

Like the baboons, most birds, mammals, and at least some of the reptiles I've met are highly attuned to human body language and tenor of voice. By moving slowly and without jerky motions, by sitting still and quietly observing one's surroundings,

by announcing benign intentions in a gentle voice and through facial expressions, gestures, and posture, it is usually possible within minutes to reassure most animals that it is safe to go about their business close by. (301)

The understanding of baboon rhythms, gestures, and collective movement that Smuts generated via her embodied research reminded me immediately of the understanding of cultural spaces, rhythms, gestures, and collective movements that dance ethnographers such as Dierdre Sklar (2001), Cynthia Novack (1990), Sally Ann Ness (1992) and Tomie Hahn (2007) have discovered through their embodied participatory studies of movement as dance. In the introduction to *Dancing with the Virgin* (2001), Sklar states:

Rhythms, in speech and movement, synchronize people. As anthropologist Edward Hall observes, “syncing” is the most basic form of communication, more basic than the content of language. Like language, rhythms are learned and culture specific. People recognize one another as communities through rhythmic synchrony. Racism, Hall suggests may be a matter of incomprehensibility and prejudice across rhythmic differences. “If you want to fit in,” he advises, “move to the same rhythm.” (18)

Similarly, for Cynthia Novack, movement is a form of “meaning and action” that “espouses both explicitly and implicitly” “perceptions of meaning in movement” that may “constitute part of our sense of time and space, our understanding of the construction and relationships of the body, mind, and person, or our ideas of what a man and a woman are” (1990 14). It also “may convey interactions of individual and group or provide a vision of power and power relationships. And it

may embody abstract patterns of space or of phrasing which constitute part of our aesthetic or cognitive sensibilities” (14).

Through moving to the same rhythm as her baboon subjects Smuts was indeed able to participate in a community “through rhythmic synchrony” (Sklar 18). Consequently, she was, able to experientially participate in baboon forms of “meaning and action,” sense baboon “time and space,” and understand societal “construction and relationships of the body”—including gendered ones (Novack 14). Additionally, her embodied approach gave her insight about “interactions of individual and group”, visions of “power and power relationships” (14). There were clearly resonances here that indicated the potential of exploring understandings of animals through embodied means, resonances that propelled my work and served as a pseudo-conceptual underpinning to the endeavour.

However, while creating *ARK* and *ARCHE*, I was continually reminded of the vivid bodily differences between myself and other animals—the kinaesthetic ruptures that distinguished us from one another. These differences were what produced the many “multitudinous,” “amalgamated animacies” (Maltais-Bayda 2018) that comprise the two choreographies. I began to wonder whether Smuts’s generalizable prescriptions for human-animal relations erased opportunities to understand some significant differences between humans and animals. If they might reduce opportunities for discovery and awareness by stressing shared characteristics, evolutionary continuities, and origins over different characteristics, evolutionary discontinuities, and contemporary moments. Returning to Smuts’s work, I still see vibrant resonances, but also sense tremendous dissonances between the worlds of embodied ethological work and embodied dance ethnographic research. Perhaps these dissonances indicate the

potential for dance researchers' work to contribute to modes of ethnological research, and simultaneously, clarify and problematize the meanings that ethologists take from their moving encounters with animals.

These dissonances are perhaps best understood by looking at the knowledge and understandings that Smuts gathered, not about her baboon subjects, but about herself: gradually, over the course of her apprenticeship within baboon society, Smuts began to feel that she was “turning into a baboon” (299). This transformation allowed her to experience the world “directly and intuitively” rather than “analytically” (299). For Smuts, “something long slumbering woke inside of me, a yearning to be in the world as my ancestors had done, as all creatures were designed to do so by aeons of evolution” (299). Similarly, when characterizing the humbling and intimate experience of being in the forest with her dog Safi, she states that “as with the baboons, I get to relinquish my separate, analytic self, turning myself over to the deeper wisdom of an animal whose ancestors adapted to this North American landscape long before mine did” (303). Later, when referring to the choreographic “rituals” that develop “spontaneously” (304) between the two of them she explains:

this is the way of female baboons living their lives together in the same troop. This is the way of wolves whose survival depends on enduring commitments to other pack members. This is also the way of humans, a way we forget all too often in this day and age. It is a language of bodies and sounds and movements that preceded the spoken word and that tends to speak the truth, where words might lie. (304)

Smuts's account of her bodily experience with baboons suggests analogies between her work and the work of contemporary dance ethnographers, but these other, more personal



observations direct me to the work of a different generation of dancers and dance scholars who were invested in evolutionary origins, universal truths, and ancestral knowledge—figures whose convictions are contested through Novack and Sklar’s foci on movement as part of historically situated, locally constructed, subjective practices.

To me, Smuts’s words suggest comparison to iconic statements by Martha Graham, whose vision of her own movement practice was at times idealistic, romantic, culturally insensitive, and entangled with notions of ancestral knowledge, evolution, and myths of origin. Smuts’s reference to “a language of bodies and sounds and movements that preceded the spoken word and that tends to speak the truth, where words might lie” (304), bears more than a passing similarity to Graham’s statement that “Movement never lies. It is a barometer telling the state of the soul’s weather to all who can read it” (1991 66).

Similarly, Smuts’s statements about the bodily skills she used in the field being “inherited from my ancestors” and that what she learned from the baboons was to “be in the world as my ancestors had done, as all creatures were designed to do by aeons of evolution” through shedding “layers of thinking and doing that sometimes served me back home but were only hindrances here” (299) resonates with Graham’s assertion that:

particularly for a dancer with his intensification of life and his body, there is a blood memory that can speak to us. Each of us from our mother and father has received their blood and through their parents and their parents’ parents and backward into time. We carry thousands of years of that blood and its memory. How else to explain those instinctive gestures and thoughts that come to us, with little preparation or expectation. (9-10)

Additionally, Smuts's universalising statements that until "recent times, all humans possessed profound familiarity with other creatures" (294) and that "each of us has inherited this capacity to feel our way into the being of another, but our fast-paced, urban lifestyle rarely encourages us to do so" (295) is, again, strikingly similar to Graham's situating of modern culture as a force interfering, or even compromising, the human experience of being an animal: "No animal has an ugly body until it is domesticated. It is the same with the human body. Civilization has made it impossible and undesirable for us to lead the rugged lives of our ancestors..." (29). These comments are illustrative of a particular way of conceptualizing movement, and the type of knowledge it provides access to, that is as antiquated as mechanistic theories of animal life.

Early dance anthropologists, researchers, and authors often observed in the dances of other cultures indications of a particular "level" of social development which provided the researcher with that culture's relative (and usually elevated) location on a hierarchical evolutionary ladder that terminated in "modern" humans (Williams 2004 [1991]). Correspondingly, the dances of "primitive" people did not articulate those peoples' particular individual and collective, historically situated, responsively articulated understanding of their own contemporary worlds, but rather, their current suspension at a particular point in a primordial natural continuum that 'modern' humans had either, depending on a researcher's inclination, fortunately escaped from because of the civilizing influence of culture, or tragically lost access to because of the civilizing influence of "culture" (Grau 1998). By analysing and understanding "primitive" dances, researchers imagined that they were poised to recover the universal ancestral knowledge embedded with them and/or reconstruct deterministic evolutionary lineages that led, of all places, to

themselves (1998). These dances were often conceptualized, playing off some of Smuts's terms, as direct, intuitive, unanalytic, truthful, and demonstrative of a sort of "deeper wisdom" (303).

When implications of this figuration of movement were reconsidered by dance scholars in the latter half of the 20<sup>th</sup> century, particular works of dance literature and contemporary adherents to that literatures' universalizing and hierarchical philosophical orientation were critiqued as reductive, racist, sexist, and deterministic (Youngerman 1974; Kaeppler 1978; Kealiinohomoku 1983 [1970]; Williams 2004 [1991]; Buckland 2014). Subsequent critical ethnographic projects involving dance research, rather than focusing on the establishment of a dance's evolutionary relationships with other dances or the examination of a dance as an embodied time capsule that contained pure ancestral knowledge, focussed on a particular dance's cultural context and contents, and later, even on its effects on the researchers own body and their qualitative understanding of movement. Findings by these researchers were often delineated as subjective, partial, and necessarily limited in scope rather than objective, whole, and expansive in nature.

In "Reprise: On Dance Ethnography" (2000), Dierdre Sklar speaks to the generative nature of this revisioning:

We now have a range of theories, methods, and case studies that address the cultural situatedness of dance and movement, a range reflected in the names applied to the subject: "dance ethnology," "cultural studies in dance," "ethnochoreology," "performance studies," "anthropology of dance," and "anthropology of human movement." (70)

Sklar also stresses the manifestation of “two new trajectories that have risen in ethnographic dance studies” (70). The first trajectory was “sociopolitical” and focussed on “globalization, transmigration, de- and re-contextualization, invented communities, kinesthetic homes, all of which address the way dance works and is worked upon in the changing contexts of world politics” (70). The second trajectory was “kinesthetic” and focussed on “movement itself as a way of knowing, a medium that carries meaning in an immediately felt, somatic mode” (70). While both trajectories could be of value to ethologists to explore more concertedly, the former has, to an extent, already begun to be addressed by multispecies ethnographers such as Eben Kirksey (2014), Anna Tsing (2015), Stephan Helmreich (2009) and Agustin Fuentes (2010), whose work situates nonhuman life within historically inflected cultural contexts. Recognizing this, I would like to focus on the latter, and its potential application to ethological research.

Although Sklar recognizes that kinaesthetic approaches to the study of dance can differ in whether they stress spatial or temporal aspects of movement (70-71), she stresses that, in either case, they “rely on personal experiences, not so much to facilitate particular steps or choreographies, as to understand the way sensation itself is organized” (71) and treat movement as “emergent, felt experience that works conceptually and metaphorically in relation to larger patterns of social meaning” (71). Sklar states that this approach functions in contradiction to the “traditional practice to erases the ethnographer’s body from the ethnographic text” and foregrounds the reality that “‘subjective’ bodily engagement is tacit in the process of trying to make sense of another’s somatic experience” (71). Through this research process, Sklar claims that, in resonance with Smuts’s declaration of feeling that she was “turning into a baboon” (301), that one’s “body can be transformed by the experience” (Sklar 71).

Sklar states that an ethnographer working in this mode “is not drawing attention to herself, but to the kind of detailed sensations that carry meaning” (71). In partial opposition to this idea, I would suggest that within ethological contexts, where there is an absence of a human subject who can articulate meaning through words, a focus on drawing attention at times to oneself, and to one’s conception of space might be a generative way of understanding how physical encounters with being with other bodies alter the perception of “the kind of detailed sensations that carry meaning” (71).

In the fourth year of my PhD studies my living arrangements changed. I found myself in a new apartment with a new roommate. Scattered strategically around the apartment, under radiators, beside the toilet, and behind couches, were small mousetraps set in place to deal with the influx of tactician rodents during the cold winter months. Having been accustomed to walking around barefoot, I was a bit concerned that I might unwittingly trap a toe or two and asked my roommate if I could get a cat to serve as a disincentive for mice to set up residence within the territory of our apartment. I am allergic to most cats, so I searched the internet for a non-allergenic breed and after learning of a few and also learning of their substantial price tags, I returned to the internet to look if there were individuals any of these breeds available for adoption in Ontario. Fortuitously, I found a Devon Rex breeder in London, Ontario who was shuttering her cattery and looking for someone to adopt a male, four-and-a-half-year-old chocolate-coloured long-haired Devon Rex. I spoke to the breeder, who asked about my life and living arrangements and informed me that “Cheribebé Oscar De La Rexxa” required a lot of attention (she actually did this almost immediately because he had been returned by a woman the week before who wasn’t prepared for his level of interactivity), needed regular brushing, did not like other cats, and perhaps most importantly, would need to be an indoor cat due to his breeds’

susceptibility to skin cancer (a result of the reduction in coat content that made him hypoallergenic). Later that week I removed all the mousetraps from the house, drove to London with a friend, met the small brown cat with crinkled whiskers and bright yellow-green eyes, took him back with me to Toronto, and promptly changed his name to Boner—on account of his uncanny ability to appear when least desired.

Over the next few months Boner acclimated himself to his new home and living arrangements. He spent his time running over and under furniture, climbing on televisions, refrigerators, audio equipment, and shelves, finding holes in the walls that led to other apartments, drinking out of leaking faucets, wedging himself in-between my computer and me, coveting lighters to chew on, scratching on carpets, sofas, curtains, feet and hands, sleeping behind stacks of records and books, watching the people outside on the street, the birds on the ledges, and the squirrels on the back patio, escaping out the front and back doors, and failing miserably at catching mice or even the slow, white moths that periodically appeared around the apartment. I realized a number of things over this time, including that if I had wanted a cat that would be a mouse deterrent, I had chosen unwisely. More interestingly, I realized that Boner perceived my body and the apartment we lived in quite ways differently than I did. I seemed to be at times a whole body that he could address through his voice and body language in order to open doors, get food from the refrigerator, or turn on faucets for him to drink water from, and, at other moments, an assemblage of useful parts that could be used for rubbing, playing, and warmth. Likewise, my apartment was not filled with my bed, couch, chairs, tables, books, records, clothes, rugs, computers, bags, and other objects, but things that could be climbed on, slept behind, hidden under, scratched, rubbed against, moved, or consumed. One of the few things we seemed to agree upon was that we both liked the same pillow. We had different

affordances (Gibson 1979) and, in many ways, despite living in the same place, experienced different spaces and lived in very different worlds.<sup>77</sup>

Living together in two different universes was difficult at first. I was summarily transformed from a person attempting to choreograph my life (who had engaged a cat to displace toe-pinching mousetraps) into a new recruit enlisted into the service of a specific feline's choreographic proclivities. Consequently, as Boner adapted himself to me and the apartment, I adapted myself and the apartment to him. I engaged with trying to understand how he might experience his world in his body. I noticed he was frequently positioned above me. Recognizing that that we had 10-foot ceilings, I built him shelves and ramps that let him walk down the lengths of the hallway and living room. I noticed he wanted to scratch furniture, curtains, and carpets and got him a scratching post that he declined to use. I noticed he liked to smell the air and watch the birds and squirrels outside, so I always left the window open a bit, and spread birdseed out on the back patio. I noticed he liked to sit on me when I was reading or using my laptop computer, so I changed the way I was sitting so that he was accommodated. I noticed he wanted to attack my hands, so I cut his nails and then slept with my hands hidden under blankets at night. I noticed holes in the old walls he was attracted to and sealed them but left gaps in my shelves that might serve a similar purpose. When entering or leaving the apartment, I always checked for a small body attempting to scamper into the hallway. I wore thick t-shirts to bed, so he could knead my stomach at night without waking me up. I left sweaters I had worn on the floor, so he could sleep on them rather than on the clean ones on my shelf. I learned new ways to touch, taking direction from his deep purring and the occasional flash of his sometimes-blunted claws. I woke up early, so that I wouldn't be woken up by a claw pulling at my lip and tried to get home before dinner, so that I wasn't met by a furiously hungry and disgruntled furry

roommate. I found new ways to feel and think about my body, new ways to articulate my limbs and my spine, new ways to walk down the hallway, new ways to sit up, sit down, rollover, and stand-up, new ways to look and listen, to use my voice, and to play. I got myself a new pillow.

Through this somatic dialogue with Boner I have consciously and even unconsciously discovered more of what constitutes his specific *umwelt* and also clarified aspects of my own. When I meet other cats, I certainly notice parallels between them and Boner, but also recognize significant differences. It is debatable whether or not I am any closer to a deeper understanding of “feline *umwelten*,” and probably altogether more realistic to say I fragmentarily understand one particular cat’s *umwelt*. I can say though, that as I move with, alongside, and beside Boner I understand him in a way that is meaningful to me that eclipses any knowledge gathered from dissecting a dead wet black cat with dull green eyes in a vertebrate anatomy class at university.

When I am with my cat, I become aware of the spatial, temporal, and qualitative transformation of my body’s actions as they become organized in relation to a body that is very different than my own. When conscientiously focused on relating to my cat I feel a transformation in my posture, gestures, use of space, force, rhythm, and the duration of my movement that are specific to my cat at a particular moment. In these moments I find myself composed differently in relation to when I am relating with other human beings or other living things. During the unfolding of these fairly quotidian interspecies relations, I feel what Sklar calls a “dropping down into the body” (72), which might be analogous to Smuts’s experiencing the world “directly and intuitively,” however, contra to Smuts, my bodily experience does not prevent me from still perceiving aspects of my encounter “analytically” (299).



During my experiences with my cat, I too am practicing a “research method” where “one attends to doing with proprioceptive awareness” (71). Sklar asserts that “to attend in a somatic mode is to apprehend, as felt experience, the kinetic dynamics inherent in movement, images, and sounds,” and that movement training “accustoms us to distinguish nuances between dynamics, feeling them as kinetic sensations, seeing them in others’ moves, and recognizing their reverberations in words” (71). When a new person comes into my apartment and hopes to interact with my cat, I can, because of my previous kinaesthetic research, suggest specific postures, actions, uses of space, forces, rhythms, and durations of movement that *they* might adopt to facilitate this interaction. While these recommendations might overlap, in a general way, with generalized modes of relating with other cats in the world, they are, as choreographic suggestions, specific to *a* cat, not all cats. I have no doubt that Smuts, as well as other ethological researchers, would be able to furnish the same sort of detailed and specific information to a stranger or new colleague when faced with the task of introducing them to either a specific community of animals, a specific animal from a community of animals, or a specific animal, such as Smuts’s dog Safie.

Through consciously articulating and verbalizing this kind of information to others, bodily experiences with animals become more than moments for understanding universal movement vocabularies, the origins of sociability, and evolutionary relations—they also become opportunities for understanding subject-specific movement vocabularies, contextualized embodied modes of sociability, and emergent relations that are organized around the bodies and environments that are present. Anthropologist Sally Ann Ness suggests that:

The ethnographer stepping into a foreign culture is like the student of choreography learning to step into a dance. At first, there is the awkward encounter with new ways of doing things, which must be accepted, not altered. Like the dancer, the ethnographer must learn by participation, through repeated interaction, with the help of those around him or her, such as they have to contribute. Attempting to defer continually to the designs of an initially alien way of living, the hope of the ethnographer is like that of the performing artist: eventually some competence within or some mastery over a foreign way of acting will be gained. (1992 12)

I would suggest that ethologists too could consider themselves “like the student of choreography learning to step into a dance” when they encounter animals and experience the “awkward encounter with new ways of doing things” (12). It would be fascinating to understand how they “learn by participation, through repeated interaction” “the designs of an initially alien way of living” and gain “some competence within or some mastery over a foreign way of acting” (12). It would also be fascinating to understand how these encounters temporarily shift or permanently decenter, not just their ideas about animals, but their own bodies, the spaces around them, and their movements.

Encouraging ethological professionals to enunciate their embodied competencies and epiphanies and account for their own shifting subjective understanding of movement in tandem with describing their intellectually transformational experiences of moving in relation to other beings can only further the conscientious development of both transmittable ethological practices and contextualized interpretations of specific animal’s “thinking in movement” (Sheets-Johnstone 2009a [1981]). At very least, it might discourage bodily experiences from being mobilized in service to the assumption that,

when outside of “civilized” contexts, human and nonhuman bodies are always and only “doing what they always did in the world they had always lived in” (Smuts 295).<sup>78</sup>



**Figure 38: Boner. Photograph by Author, 2019.**

## CHAPTER 6

### CAPTIVATED BY CAPTIVE SUBJECTS: TAMING, ORDERING, AND STAGING BODIES OF KNOWLEDGE

*Man is an animal suspended in webs of significance he himself has spun.*

Clifford Geertz, *Interpretation of Cultures* (1973)

*Every subject spins out, like spider's threads, its relation to certain qualities of things and weaves them into a solid web, which carries its existence.*

Jakob von Uexküll, *A Foray into the World of Animals and Humans* (2010 [1934])

*Blessed be all those who, dreaming of Sleeping Beauty, died in the hedge and in the belief that beyond it there was a moment in which time for once and all stood still and certain.*

Günter Kunert, *Sleeping Beauty* (1991)

*It is through our personae that we philosophers become always something else and are reborn as public garden or zoo.*

Deleuze and Guattari, *What is Philosophy?* (1991)

Jakob von Uexküll's *A Foray into the Worlds of Animals and Humans* (2010 [1934]) is concerned with describing the multiple perceptual worlds of diverse animal species—the webs of meaning created through an organism's sensual relationship with its environment. These webs of meaning are more than just the manner in which biological entity operates within a singular empirically shared world, they are the means by which particular organisms understand, navigate, and construct specific and self-centered worlds. Describing, in colourful detail, different creatures' affective relationships with their 'world'—the sensorial bubbles they reside within - through specific case studies, Uexküll elucidates a theory of the *umwelt*—a subject-specific relationship with space, time, objects, and even virtual or 'magical' things predicated on

the subjective perception of the different ‘tones’ present in a fragmented yet shared universe. Uexküll’s foray has massive implications for the understanding of life, as his work challenges thinkers who are “adherents to a machine theory of living beings” in which animals are envisioned as “pure objects” and “nothing more than a selection of effect-tools and perception-tools” (41-42). For Uexküll, this behaviourist paradigm is reductive because “one forgets that one has from the outset suppressed the principal factor, namely the *subject* who uses these aids, who affects and perceives with them” (41-42). In considering a subjectivity conferred by its emanation from a particular body attuned to a particular environment, life is not seen “simply a mechanical assemblage” but rather as a “machine operator who is built into the organs just as we are into our body” (42).

As the title to the work suggests, *A Foray into the Worlds of Animals and Humans* considers the perceptual worlds of both nonhuman *and* human animals and gently implies that the concept of the *umwelt* is an antidote to theories that “mechanize human beings” in which “our sensibilities and our will are mere appearances” and at best “valued only as background noise” (42). Throughout his foray Uexküll illustrates the considerable differences between species-specific animal *umwelten* *as well as* the differences between particular human *umwelten*. In a section entitled “The Same Subject as Object in Different Environments,” Uexküll examines the different “effect tones”<sup>79</sup> that an oak tree has for different human and animal subjects. All of these different tones are the result of the oak (a subject in itself) being perceived differently since every subject’s “environment cuts of the oak a certain piece” (130) and in “the hundred different environments of its inhabitants the oak plays an ever-changing role as object, sometimes with some parts, sometimes with others. The same parts are alternatively

large and small. Its wood is both hard and soft, it serves for attack and defence” (132). For a fox, “who has its den among the oak’s roots” (129), the oak has a protection tone. Similarly, an owl also receives a protection tone from the oak’s mighty branches, but a very different protection tone, as the roots “lie entirely outside the owl’s environment” (129). For the squirrel, the oak, “with its many branches and handy springboards, takes on a climbing tone” (129-130), and for songbirds “which build their nests in the remote twigs, it offers the needed carrying tone” (130). For a “rational” forester, the oak is “no more than a few cords of wood” (128) and consequently has only a use tone, however, for the girl “whose forest is still filled with gnomes and sprites” (128) the oak has a danger tone.

As suggested through the previous example, within Uexküll’s work nonhuman animals have a specific and relatively fixed subjective experience of their world(s) conferred by their species-being and physiology while human animals are granted the potential of a more fluid experience of the world, or as philosopher Giorgio Agamben phrases it, a more “open” orientation (2004). In the conclusion to *A Foray into the Worlds of Animals and Humans*, Uexküll expands briefly upon this ‘openness’ by referring to the multiple complementary and contradictory worlds of researchers working in different scientific disciplines. Like with his animals, Uexküll finds that each scientist’s perceptual world is “tailored to the capacities” (133) of the subject: for the astronomer, who has “altered his eyes through gigantic optical aids in such a way that they are capable of penetrating outer space as far as the most distant stars,” the “suns and planets circle at a solemn pace” and “swift-footed light takes millions of years to penetrate this environmental space” (133); for the deep-sea researcher, “not constellations, but fantastic images of deep-sea fish circle his enclosure, with their uncanny maws, their long feelers, and their ray-shaped phosphorescent organs” (133); in the environment of the atomic physicist,

“electrons circle around him just as constellations circle around the astronomer” (133). In distinct contradiction to one another are the worlds of the physicist and the sensory physiologist, where light exists in one as “waves” and in the other as “colours” (134). Similarly, for the airwaves researcher—like the atomic physicist—there are only waves, while for the musicologist there are tones. Likewise, in “the behaviorist’s environment of Nature, the body produces the mind, but in the psychologist’s world the mind produces the body” (135). An obvious inference to make is that the capacities of the human subject Uexküll speaks of are the results of particular life experiences in particular regions within particular social niches that involve particular applications of technologies—all the cultural factors that continually direct the species-specific, yet always unique, biological framework of particular human bodies towards particular enfolded orientations. These, in turn, then shape the sensorial and physical development of the human subjects as they act over time and particular actions become “habits,” positions become “alignments,” and gestures become “choreographies.”

If Uexküll’s scientists possess individual *umwelten*, so too do dancers. While everyone everywhere shapes and is shaped by their subjective experiences, dance may be a particularly fertile site for examining the diversity of human *umwelten*. Dancers, regardless of their cultural origins, spectacularly embody, through their particular habits, alignments, and choreographies, the gross and minute effects and affects of particular ways of experiencing, relating to, and acting in the world. The fundamental difference between Uexküll’s scientist and a dancer is that the primary ‘object’ a dancer studies—or attunes to—is their *own* body and its relation to specific real and virtual ‘things’—other bodies, rhythms, particular sounds, surfaces,

architectural spaces, virtual conceptions of spaces, physical forces, instruments, costumes, props, language, intellectual or abstracted concepts, and imagined horizons.

Dance scholar Susan Lee Foster's work "Dancing Bodies" (1997) hints at these sensual relations and the sensorial aspects of different dance worlds through her brief descriptions of the "perceived body" (237) and "five twentieth-century techniques that formulate distinct bodies and selves" (241). According to Foster,

The dancer's perceived body derives primarily from sensory information that is visual, aural, haptic, olfactory, and perhaps most important, kinaesthetic. Dancers see large portions of their own bodies, a vista that changes as they move. They hear the sounds produced by locomotion, by one body part contacting another, by the breath and by joints and muscles creaking, popping, and grinding as they flex, extend, and rotate. They feel the body's contact with the ground, with objects or persons, and with parts of itself, and they sense its temperature and sweat. They smell sweat and breath. They sense kinesthetic indications of the tension or relaxation, tautness or laxness, and degree of exertion for every muscle, the action of any joint, and consequently the proximity of one bone to another, the relationship of any part of the body to gravity, and the entire body's equilibrium. (237)

Like Uexküll's scientists, the individual practitioners of different movement disciplines all eventually inhabit different sensorial universes as their "perceived bodies" (237) interact with each discipline's virtual "ideal bodies" (237) and are encultured through specific pedagogical practices and exercises enunciated by a "demonstrative body" (237) that leverage specific language, specific musical



structures, specific bodily topographies, specific ways of envisioning spaces, and modes of sociability. Eventually, each discipline

constructs a specialized and specific body, one that represents a given choreographer's or tradition's aesthetic vision of dance. Each technique creates a body that is unique in how it looks and what it can do. Generally, the style and skills it imparts can be transferred only partially to another technique; thus, ballet dancers cannot assume the bearing or perform the vocabulary of movements found in contact improvisation, and vice versa. Training not only constructs a body but also helps to fashion an expressive self that, in its relation with the body, performs the dance. (241)

Absent from Foster's clear figuration, or perhaps occluded by her evocation of the "expressive self" (241), is the intimately subjective nature of dance. Accordingly, each technique would also generate Uexküllian 'effect tones' that fashion a "specialized and specific" (241) *subject* that becomes unique in how it *feels* and thus, what it *experiences*—the preconditions for its *looking* and *acting* in a certain fashion. Thus, a ballet dancer feels the torso as "a taut and usually erect center connecting the four appendages and the head" (243); a Duncan dancer feels the "limbs and graceful phrasing emanate from the protean ductility of the respiring central torso" (245); a Graham dancer feels "movements originating in the torso and radiating out with restrained tension to the periphery of the body" (246); a Cunningham dancer feels "the body's segments and their possible range of movement" (248); and, a contact improvisational dancer feels the transfer of "weight across any of the body's joints" (250). These specified ways of *feeling* are essential parts of what limits practitioners from perfectly assuming "the bearing" or performing "the vocabulary of movements" (241) of other techniques. More simply put, while

linguistically a performer from each technique can be said to possess a physiological “torso” (or any other body part), on a subjective, sensorial level each individual performer necessarily perceives a very different physiology with different capacities.

In *A Foray into the Worlds of Animals and Men*, Uexküll discusses differences he perceives between distinct species’ perception of the same room through references to three different illustrations. In each illustration, the

same room is represented. But the objects found therein are reproduced in different colours that correspond to the number of effect tones connected to the room by the human being, the dog, and the housefly [...] In the human’s environment, the effect tones of the objects in the room are represented by the sitting shade (salmon) for the chair, the food shade (pale pink) for the table, and, for the glasses and plates, further corresponding effect shades (pink and red: eating and drinking tones). The floor possesses a walking shade, while the book shelf (purple) has a reading shade, and the secretary shows a writing shade (cream). The wall has an obstacle shade (turquoise), and the lamp has a light tone (white). (96-97)

In contrast, in the dog’s room, “only eating shade, sitting shade, and so on, remain. All else shows an obstacle shade” (97). Similarly, in the fly’s room, “everything has only a running tone except for the objects on the table and the lamp” (97). How would the same space be perceived by each of Foster’s differentiated yet oddly impersonal dancing bodies? The same studio? The same stage? The same floor? The same music? The same audience? The same ‘other’ dancing bodies in the room? The same individual ‘body parts’? The same ‘movement’? What would be

the shades these ‘things’ are colored in according to their use by a subject? What would be the complex kinaesthetic pattern produced by all of these embodied shades? These shades are essential keys to understanding what exactly dancers, dances, and dance techniques *embody* and for discerning the *meaning* behind performances they enact, the *intent* of pedagogies that instruct them, and *logic* of the bodies they fashion. Perceiving these different shades is not possible only through reference to syllabi of exercises, records of performances, disciplinary dogmas, or the textually stated intents of their ‘creators,’ but through understanding the perceptual environments which these fleshy entanglements of biological matter and cultural material developed in—the specific worlds that these shades *evolved* in to become the bearers of subjective meaning.

In *Wild Animals in Captivity: an outline of the biology of Zoological Gardens* (1964), zoologist Heini Hediger outlines a theoretical framework for captive animal care and zoological enclosure design articulated through aspects of Uexküll’s concept of the animal *umwelt*. Central to his framework is the goal of developing an understanding of a animal’s ‘natural’ environment and the many “tones” that coloured the animal’s existence. For Hediger:

each animal lives in its own specific world. The environment (*milieu*) offers as it were a reservoir of stimuli from which the subject constructs its own world. The building material consists of a variety of things of vital importance or biological interest to the animal. By capturing it we utterly destroy the animal’s previous world, and put it into a different environment. (27-28)

Credited with revitalizing modern zoological practices through his concerted attention to species-specific needs, Hediger states that “the chief duty of the biologist of the zoological gardens is to

prevent sterile isolation and to combat by all possible means the harm done to the species through capture” (182); his critiques and design interventions are directed against zoological practices that situate the animal in bare partitioned spaces designed primarily for spectatorial visibility and efficient institutional maintenance. According to Hediger, these homogenous, aseptic, and barren enclosures induce significant physiological and psychological distress in animals and provide limited opportunities for an animal to sensorially engage with its “territory” in a way that meaningfully “carries its existence” (Uexküll 53). Obviously, as Hediger astutely recognized the zoo as a fabricated space, he could not replicate animal’s natural environments in any authentic manner, but rather, he attempted to spin a particular, wholly fabricated web of meaning that “suspended” (Lee) an animal’s existence.

Hediger’s zoological methodology refuted the “traditional idea of the wild animal roaming more or less aimlessly and at random about the world” (12), an antiquated belief that he implies had led, in part, to the homogeneity of zoological conditions, as, under this assumption, animals were not recognized as living in relation to specific environmental phenomena but rather in a state of continual ‘animality.’ The zoological enclosure had previously been envisioned as a space that would not require significant differentiation beyond ensuring the practical containment of particular bodies, but Hediger, supported in his views by contemporary ethological research, claimed that “roaming does not in fact occur even in the limited section of the field we call territory” (12). Roaming in a haphazard fashion did not occur because each animal of each species had specific “space and time pattern” (12), or, in other words, specific choreographies. Understanding these animal choreographies became possible if animals are “studied in undisturbed freedom, in their natural surroundings” (Hediger 1968 16) by field

biologists who record “in the minutest detail, with perseverance and devotion, the common daily life of a bird, beast of prey, or a monkey” (16).

According to Hediger, regardless of biological kind, the space and time pattern of all species develops out from the “home,” “a space of concealment,” and “often the place to which the animal retires under threat of danger: where it rests and sleeps; and often, too, brings its young into the world and protects them in their infancy” (1964 13). The home is the central point in a “territory”—the “area rendered distinctive by its owner” and “defended by it” (9). Extending out from the home into the territory, like currents “of highly fluid medium within a viscous mass,” were trackways, the routes described by Uexküll as “the familiar path” (13), which lead to distinctive and unique places. Utilized according to a highly regimented schedule at specific times, Hediger’s “places” are the topographical sites of Uexküll’s animal tones, and thus, are differentiated according to use as “bathing places,” “feeding places,” “excretion places,” “demarcation places,” “food storing places,” “drinking places,” “rubbing places,” etc. (14-15).

As an animal does not use the entire gross territory in which it lives, but rather exhibits a specialized space and time pattern that recognizes only specific areas of its territory during specific periods of time, Hediger’s zoological care and design plans extract the pattern from the territory and then apply a “biological treatment,” not “a pedantic attempt at imitation, either in the matter of space, or food, or the animal-man relationship, but an adequate substitute for natural conditions and a sensible interpretation of them” (159). The result is a synthetic version of an animal’s species-specific *umwelt* in a highly compressed and truncated form. Within the safety of this form, animals, theoretically, have the means to create for themselves a new

territory with a new “home.” Hediger also stresses the benefits of his zoological methodology for human spectators, for, once

the zoo public realizes the laws of the space-time system and the relations between the animals, principally through the use of labels, guides, tours *etc* [sic] much that previously seemed dull or unimportant will seem interesting [...] What seemed merely a matter of chance now appears obedient to laws; what was apparently without order now seems according to plan and thus worth watching. (178 -179)

By presenting human spectators and providing animal inhabitants of the zoo with differentiated spaces, which possessed simulacra of aspects of the an ‘original’ habitat, a specific care schedule based on aspects of vital biological intervals observed in a species’ wild performance itinerary, and curatorially deployed knowledge of aspects of species’ unique expressive behaviour, Hediger adamantly believes the debilitating effects of captivity can be mitigated successfully—even to the point where “the state of harmony in captivity is just as complete, or incomplete, as that of the animal in freedom” (29).

Hediger’s deployment of Uexküll’s work is both profound and paradoxical. On one hand, it brilliantly leverages the concept of the *umwelt*, in tandem with scientific observation of animals in the field, for new institutional purposes. Working against anthropomorphic tendencies that homogenize animal species, Hediger is able to grasp specific foci of animal life, and consequently, able to improve the basic quality of life for particular animals in captivity. On the other hand, Hediger’s subtler anthropocentrism assumes that he and other humans can definitively identify the “places” or “tones” that compose animal *umwelts* in a manner that is

“just as complete, or incomplete, as that of the animal in freedom” (29) demonstrates an obtuseness to the broader implications of Uexküll’s concept. For, in as much as Uexküll’s concept provides an opportunity to glimpse animal worlds, it simultaneously denies their full realization, as observations emanating from a human umwelt inflect any other animal’s existence with tones derived from a human umwelt. Perhaps this explains why, despite Hediger’s life-time of concerted zoological efforts, analogous in some ways to modern urban cultural revitalization projects (Uddin 2015), so many people continue to be dissatisfied with their experience of the zoo, and why, so many animals still refuse to meet us as they fail the test of thriving within its confines (Warkentin and Fawcett).

*In Body, Movement, and Culture: Kinesthetic and Visual Symbolism in a Philippine Community* (1992) dance anthropologist Sally Ann Ness examines the sinulog dance form through reference to her in-situ participant observation ethnographic research conducted in Cebu City in the Philippines in 1984 and 1985. Her research focuses on the “web of meanings” (9) of three related, yet distinct versions, or sub-species, of the sinulog: the tindera’s healing ritual, the troupe’s dance drama, and the festival based ‘cultural’ exhibition. Her research is predicated on the idea that

one of the things made visible in any choreographed movement, whether it is the creation of an individual artist or the creation of an entire culture—a folk tradition—is the human capacity for establishing rapport. Revealing the tensions and fluencies, harmonious or discordant, that exist habitually or instantaneously between people or between humans and various elements or aspects of the world around them is one general kind of relation that choreographed movement invariably makes apparent. (13)

Ness emerges from her extended research experience with the understanding that in all three versions of the sinulog choreography there “was an expression of this urban world, a ‘pressing out’ or a symbolic extraction of that world’s dynamic’s: its climactic conditions, its patterning of time, space, and people, and its contemporary religious, socioeconomic, and sociopolitical situation” (17). Is Ness’s understanding of the sinulog as a symbolic *extraction* of that world’s dynamic akin to Uexküll’s understanding of the animal as living *extraction* of its world’s dynamics?

If Hediger was to acquire a new species—a dynamic form of life from the Philippines called a *Sinulog Phillipineus*—and then refer to Ness’s ethnography to tease apart its *umwelt* and create a substitute world for it to inhabit, which threads of its former existence would be deemed essential? What exactly would be its space and time pattern? Could the sinulog be extracted from its territory? Which territory? In this fantastic scenario, Ness seems analogous to Hediger’s ethologists who study in “detail, with perseverance and devotion, the common daily life” (Hediger 1968 16) and provide him the raw wool with which to spin an environmental garment for his organisms. Her embodied observations of the sinulog(s) translated it into a textual form, her translation of signs “from a world vividly alive with visual forms” (10), would become the basis for Hediger’s replication of the ‘tones’ that “carries its existence” (Uexküll 52), for his creation of a new “home” for the sinulog, and for his curation of an experience for spectators where “much that previously seemed dull or unimportant will seem interesting” (Hediger 1964 178) and “what was apparently without order now seems according to plan and thus worth watching” (179). Obviously Hediger’s task would not be a simple one. Which of Ness’s three differentiated sinulogs would be chosen as the model from which to fashion a world? Would he



attempt to acquire all three and create adjacent but distinct exhibits, so people could admire evolution at work? Or would they be allowed to intermingle within one enclosure as they had in the Philippines? If he could just choose one, would he create a composite *sinulog*—a generalization that synthesized their overlapping features but erased their significant differences? Or would he choose the most common and robust one—adducing it had the best chance for transplantation and acclimatization? The most modest and compact one—pragmatically suited for the zoo’s limited space and resources? The largest and liveliest one—another exotic foreign beast to add to the zoo’s existing crowd-pleasing collection of charismatic megafauna?

The *Sinulog Phillipineus*, when transported away from its territory, its specific *umwelt*, its context of “climactic conditions, its patterning of time, space, and people, and its contemporary religious, socioeconomic, and sociopolitical situation” (Ness 17) could:

1. languish, die, and become skeletal remains, part of an archive—an “object” displayed, on occasion, to entertain, instruct, inspire, or even silently wait for “reanimation” through a “repertoire” (Taylor 2003);
2. become “suspended” in an “artefactual” (Lee 2005) web structured by Hediger’s extractions of Ness’s ethnography, and eventually an objectively considered ‘subject’ within breeding, research, and education programs;
3. escape, and be consumed—becoming the “vital matter” (Bennett 2009) for another subject’s lively pursuits; or,

4. escape, and establish new “tones,” acquire a new form, and become a new subject adapted to a new “meaningful” environment.

In none of these situations does the *Sinulog Phillipineus* remain “authentic” or become an isomorphism of any of the sinulog(s) that Ness experienced through living and moving with the dynamic inhabitants of Cebu City. Indeed, the very idea of there being a singular *Sinulog Phillipineus* to *acquire* is, in itself, an error wrought by institutional classification. More than a quarter of a century later, the very real sinulog(s) that Ness witnessed, experienced, and described so brilliantly, no longer exist in Cebu City; surviving old bodies and emerging new ones now Ness-cessarily choreograph and are choreographed by new space and time patterns. Was her study about the dancers, the dances, or the act of dancing?

For Hediger, and for contemporary zoological scientists, a “fundamental problem of animal biology is how to neutralize as far as possible all modifying (non-hereditary, externally conditioned) and mutative (hereditary) changes and degeneration phenomena in captivity” (40). This problem is “fundamental” because one estimate of the zoo’s value as an institution is “success in breeding”, which, to the “zoo biologist was like arithmetical proof to the mathematician” (37). For, “if breeding does not occur, something is wrong with the conditions of the parent” (37). Under no condition is the intent to produce domesticates—“mere caricatures of their wild ancestors” (Hediger 1968 103) that show “man’s influence” (103), and exhibit “substantial modifications in the powers of expression” (111), and a “distortion or destruction of the space and time system” (114). The result of this deviance is a monstrous creature “not bound by specific ceremonial, and is in particular independent of its environment. [...] creating a

situation of morphological, physiological, and psychological degeneration, of distortion that may be grotesque” (116).

Herein lies another paradox: Hediger wants his animals to live and to reproduce in captivity, but to remain essentially unchanged. He values life as a specimen but not as a process. The true power of Hediger’s zoological garden lies in its ability to negate the life and difference which courses through it—to reproduce forms that speak to past human “objective” apprehension, rather than the dialogic reality of an animal’s subjective present. He aims to prevent life from sensibly interpreting his “sensible interpretation” (Hediger 1964 159)—to prevent his world from being refuted by theirs.

In Foster’s “Dancing Bodies,” another ‘monstrous’ body is mentioned—“the hired body” (256)—a chimeric creature posturing towards rendering the distinct species of her *pure* techniques functionally extinct. According to Foster, its ascendancy “threatens to obscure the opportunity, opened to us over this century, to apprehend the body as multiple, protean, and capable, literally, of being made into many different expressive bodies” (256). Her hired body “melds together features from all the techniques” (254), and

does not display its skills as a collage of discrete styles but, rather, homogenizes all styles and vocabularies beneath a sleek, impenetrable surface. Uncommitted to any specific aesthetic vision, it is a body for hire: it trains in order to make a living at dancing. (255)

Foster attributes the emergence of the hired body to various factors including contemporary economics, the scientization of the body, gym culture, and the “video dancing body” (255). It seems odd that these phenomena are not properly contextualized as part and parcel of an

emerging cultural environment operating in congress with multiple subjective iterations of the hired body just as intimately as the germinative bodies of her other techniques were engaged with all of their own specific contexts.

Rather than obscuring apprehension, the hired body is actually evidence of subjective apprehension of the world as multiple and protean, and proof that lively environmental perceptions, whether or not they are organized into collective and enunciative disciplinary mechanisms that instruct the body, are “capable, literally” (256) of integrating with the substance of new sensorial bodies. Clearly, the hybrid hired body, denuded in its particular expressive capabilities, unleashed from a particular space and time pattern, and gesticulating the contours, but not the content, of previous forms is a caricature with no clear place in Foster’s collection of dances. Does its “sleek impenetrable surface” (255) speak to its actual qualities or to the vision of its keeper? Bodies are never “constructed to suit one’s desires” like a “lifestyle” (255), but rather, fashioned in dialogue with a specific life with a subjective style.

Part of what shapes Hediger’s zoological ideas is his specific pedagogical aspirations. Albeit an admittedly brief distillation, much can be made of his fervent belief that through exposure to his curatorial methodology what “seemed merely a matter of chance now appears obedient to laws; what was apparently without order now seems according to plan and thus worth watching” (179). He is interested in fabricating a web of order in order for his audience to become captivated by his captive animals. The zoo’s embodiment of this order is a choreographed inoculation against “the traditional idea of the wild animal roaming more or less aimlessly and at random about the world” (12). One of the conditions for this instructive, or disciplinary, captivity to occur is that “tame animals alone should be kept in zoological

gardens” (156). For “in contrast to the untamed animal objectively and subjectively suffering from considerable restraint, in a chronic state of tension, and hiding whenever possible, the tame animal appears quite unconcerned with complete subjective freedom of movement” (156). Significant benefits are also extended to research and care staff because the tame animal “enjoys being examined, and if necessary, handled as well” (157). Hediger’s philosophy on this matter is summed up succinctly by his maxim: “tameness is attractive; tameness is healthy; tameness is expedient” (157), a convenient shorthand for addressing the profound utility of docility to the three interlocking components of the zoological enterprise: spectators, animals, and staff.

There is a similar impulse woven into the web of words that creates “Dancing Bodies.” Foster states at the beginning of the essay:

When I read recent critical writing about the body, I am, on the one hand, delighted at this new interest in it, and on the other, dismayed by the tendency to treat it as a symbol for desire or sexuality, for a utopia, for that which is unique to woman or for the elusive nature of the text. These writings seldom address the body I know; instead, they move quickly past arms, legs, torso, and head on their way to a theoretical agenda that requires something unknowable or unknown as an initial premise. The body remains mysterious and ephemeral, a convenient receptacle for their new theoretical positions. (235)

Foster is “dismayed” (235) by different ways that the body is conceived of, as these diverse notions contradict her understanding of it, and thus permit bodies to theoretically *roam*. Consequently, Foster, like Hediger, strives to correct these errors, to bring them in alignment

with her world, for she knows the body “only through its response to the methods and techniques use to cultivate it” (Foster 235) and craves “a meat-and-bones approach to the body based on an analysis of the discourses or practices that *instruct* it” (235). Like Hediger, whose pedagogical intents are directed towards an audience that might be familiar with animals on a general level but possesses no specialized knowledge about them, Foster’s essay is directed towards “someone who has seen but never participated in theatrical dance” (236). In both cases, the intent is to create a pattern that the reader or spectator can apply onto future experiences in order to create order. Like Hediger, Foster attempts to fabricate her pedagogical order through captivating and then instructing an audience using *pure* trained bodies.

The bodies that Foster chooses are not arbitrary and they are definitely not wild, as neither of these beasts would serve her purposes. Rather, each technique “constructs a specialized and specific body, one that represents a given choreographer’s or tradition’s aesthetic vision of dance” (241). Foster’s compressed recapitulation of the worlds of these techniques derives primarily “from choreographers’ and critics’ writings about the techniques” and from “observations” she had “heard or made as a student in class” (241). Like Hediger’s animals, the bodies of these techniques are not “hiding whenever possible” (156), nor are they “unconcerned with complete subjective freedom of movement” (156)—quite the opposite in fact, as they are all depicted as being cultivated primarily through instruction. Similarly, on account of the existence of the literature about them and the reality of Foster’s easy physical access to them, they evidently “enjoy being examined and, if necessary, handled as well” (157).

Foster’s collection of dancing bodies is comprised of five distinct species, which are situated in an imagined landscape and intellectual generality called “Western” (236). Despite

their contemporaneous existence, they are organized temporally—according to their general “period of discovery”—and linked to one another through a rhetoric, which speaks to developmental relations inflected by antagonism, adaptation, specialization, and ultimately, evolution. Thus: Duncan technique is a reaction “against the artificial and hierarchical organization of ballet” (243); within the Graham technique’s “set of exercises, which became routine by the 1950’s” (246), the body—“as with Duncan [...] functions as a perfect index of the self’s feelings,” but, “shares none of Duncan’s exuberance” (246); Cunningham technique is the outgrowth of its founder’s departure from “Martha Graham’s company in the late 1940’s to develop his own approach to choreography and technique” (248); and, contact improvisation technique, “developed collaboratively in the 1970’s” (250) is “weighted and momentous” (250) and exists in opposition to the “jointed” (250) Cunningham body. Despite a pseudo-evolutionary schematic that alludes to their former lively existence in dialogue with one another, the bodies of her techniques now sit separate and seemingly solemnly still, despite all of their many dynamic capacities. Adjectives and adverbs, rather than concrete objects, provide the means through which each one’s frozen kinetics are enunciated and by which the primary ‘tones’ that “carries its existence” (Uexküll 53) are made distinct and distinguishable. Thus, ballet is a world of “formal geometric features” (Foster 241), Duncan a world of “feeling-filled forms” (245), Graham a world of “agile responsiveness” (246), Cunningham a world of “complex spatial and temporal patterns” (248), and, contact improvisation a world of “lyrical athleticism” (250).

As a practitioner of dance, I fall considerably outside the scope of Foster’s intended audience, a group comprised of people who “have seen but never participated in theatrical dance” (236), just as, as a researcher with an interest in zoos, I fall considerably outside the

scope of the zoo's intended audience. Having studied iterations of all of Foster's dance species, I can comfortably state that I haven't experienced them in the stark manner they are staged within "Dancing Bodies," just as, when I go to the zoo, I cannot always say I have experienced animals in the manner they are staged. Having the majority of my training in a Canadian Graham-based technique, I can comfortably state that I have experienced a world of "agile-responsiveness" (246), but also a world of "formal-geometric features" (241), "feeling-filled forms" (245), "complex spatial and temporal patterns" (248), and "lyrical athleticism" (250). Perhaps I failed to grasp the "tones" of "its" world. Perhaps familiarity begot the ability to make finer and finer distinctions of a specific territory that seems homogenous from the outside. Perhaps I studied from too many different individuals, with too many different histories, experiences, and perspectives, and, consequently, learned not a single Graham-based technique, but many techniques—each marked by the life it was announced through and instructing me towards that particular life's understanding of being marked by it. I would hazard a guess that other practitioners of dance have similar experiences of the shifting forms they embody during their lifetimes.

In *Blood Memory* (1991), Martha Graham reflects on dance from the vantage point of old age. Informed by a lifetime of participation she appears acutely aware of the permanent marking of the body by subjective experience:

Outside my studio door, in my garden, is a tree that has always been a symbol of facing life, and in many ways it is a dancer. It began as a sapling when I first moved here and although a wire gate was in its way, it persisted and grew to the light, and now thirty



years later it is a tree with a very thick trunk, with the wire embedded within. Like a dancer it went to the light and carried the scars of its journey inside. (7)

Imagine that Graham's sapling is, as she intends, a dancing subject. It emerges out of a particular context that informs its body. It grows towards a thing that has meaning for it. This trajectory is its "avidity for life" (7). Imagine the wire gate is a body of ideas, a technique for delineating and shaping a particular perception of space present during a particular time, and a structure that *seems static, solid and definitive*. The tree encounters the wire, and its growth is shaped, and marked by it. Eventually, it becomes "embedded within" (7) it. Just as the wire becomes part of the tree, the tree becomes intertwined with the wire. As the tree grows past the gate, within a context that has meaning for it, it begins to pull on and shape the wire that had shaped it. Thus, the individual subject who encounters a body of ideas, which becomes "embedded within" (7) them, will also correspondingly shape a body of ideas, which was formerly perceived, from the outside, as static, solid, and definitive. The direction the tree takes as it grows warps the wire and thus the wire is in-formed by the tree's meaning, just as a technique is in-formed by the life of the dancing subject.

Suppose three different wires, each from a different gate with a different orientation, each perceived as a static body, all pierce the tree and become embedded within it. As the tree grew, all three wires are pulled in a similar direction and in the process move closer together, perhaps even becoming crossed at points and articulating with one other in relation to the tree's intent. Would this explain how different techniques become integrated within a body and articulated with relation, not just to their origin, but the trajectory of the subject? Suppose a singular wire passes through a number of different trees all growing out of a similar context, with

similar sources of meaning they are growing towards. In this case, perhaps the entire wire begins to warp in a certain direction, and thus its *form* would significantly change to reflect the *orientations* of the tress. The trees, operating together, exert a considerable pull on the wire, but may not themselves experience any tacit sensation of the wire's change in orientation. Is this how each of Foster's techniques can be individually conceptualized as forms which maintain integrity despite the passage of time? Suppose the same wire becomes embedded in two trees that grow out of similar contexts but, at a certain point in time, a structure emerges that blocks the main source of light for one of the trees but leaves the first tree relatively unaffected. There is, however, an alternate source of light available for the second tree and it begins to be informed by this new source. In this case, the wire is not holistically warped in one specific direction, but pulled in two different directions, and perhaps becomes stretched, distorted, and frayed as the tension increases. Is this how new techniques begin to take form? If the wire breaks, is that how they end? Are historical records of dance just sections of dead trees with broken pieces of wire protruding from them? Whatever the situation, the dancing subject, affected by a body of ideas, also affects the body of ideas according to the trajectory that its "avidity for life" (7) creates—a trajectory related to the potential sources of meaning available in a subject's environment and what each of them *offers* to it.

In the case of Susan Lee Foster, her "avidity for life" (7) appears to take her in the direction of the academy, an environment of classification, where generates order on the bodies who are *roaming* within her and perceived by her as perceived by others as *roaming*. When she considers all the different techniques piercing her body, she leverages them to work towards her disciplinary goals of authority, status, and control and the legitimization of dance as a solid

academic body of knowledge. She does not consider their entangled intermingling within her, but instead focuses on their separate origins outside of her own form. Consequently, she can see each body of ideas leading directly to a specific gate connected to a “home” with a specific “space and time” pattern (Hediger 12). Consequently, she can evoke an artificially contextualized landscape inhabited by distinct, handle-able species. Or, in other words, a zoo.

Louis the XIV (also known as the Sun King), in addition to having more than a passing interest in dancing, also had a menagerie. Built by his architect, Louis Le Vau, the menagerie was erected in the south-west part of the Versailles gardens and was staged around a circular pavilion from which clear areas, separated by walls, spread out in a fan-pattern. Each area was closed off by a fence facing the central pavilion that protected the king from his legion of beasts. Inside the building, the monarch could sit alone in pleasant contemplation of his panorama of dominion or could host guests who could admire the unobstructed vistas inhabited by animals stretching out into the distance. Tributes from subjects from different regions, the king’s animal subjects lived together peacefully, contained by the walls that divided them, collaboratively evoking a divine vision of order. Incidentally, the design of this menagerie, according to Foucault, may have been an inspiration for the design of a more notorious disciplinary building, Jeremy Bentham’s Panopticon (Foucault 1979). When I picture Foster’s zoo, with its panorama of dance, its tidy divisions, clear distinctions, and its simultaneously vast, yet limited, perspective, I imagine it resembles the menagerie at Versailles. It is a place where Foster can summon a vision of a space in “which time for once and all stood still and certain” (Kunert 1991 701). It is also a place where she can, and most magnanimously so, enlighten the uninitiated, exhibit her mastery over bodies otherwise prone to hiding and roaming, and, demonstrate how

they, like other, more sophisticated disciplines' subjects, can be rendered visible, accessible, and acquiescent. Or, in other words, tame.



**Figure 39: Backyard of the menagerie at Versailles during the reign of Louis XIV, D'Aveline (French artist late 17<sup>th</sup>-early 18<sup>th</sup> century). Coloured copperplate print (detail). Public domain (Wikimedia Commons).**

## CHAPTER 7

*Whereas before I saw a single representative of a type of bird, now I see an individual with a life, with a perceiving eye eyeing me back, and with a home to go to, an intimate avian community to engage. A singular being who just might, in fact, be as interactive, as “smart,” as playful, and, yes, as “articulate” or expressive in his or her vocalizations as Blueboy [...] Every bird is not simply “a bird” but rather “that bird,” and in that shift from indefinite to demonstrative pronoun lies the map forward for reconceptualizing our relations with nonhuman animals—from the general to the specific, from the generic to the unique, from the type to the individual among that type, and from “bird” to “Blueboy.”*

Jane Desmond, *Displaying Death and Animating Life* (2016)

*Truth, I have learned, differs for everybody. Just as no two people ever see a rainbow in exactly the same place - and yet both most certainly see it, while the person seemingly standing right underneath it does not see it at all - so truth is a question of where one stands, and the direction one is looking in at the time.*

Iain M. Banks, *Inversions* (1998)

*Empathize with stupidity and you're halfway to thinking like an idiot.*

Iain M. Banks, *Consider Phlebas* (1987)

## ANNIHILATION

Jeff VanderMeer’s *Southern Reach Trilogy* (2014) beguiles and terrifies through its depiction of an environment unaffected by human presence and deliriously immune to human action. Rather than fragile and in need of human care, VanderMeer’s uncanny landscape is perceived by those who encounter it as threatening, unpredictable, and virtually unknowable. The result is a narrative propelled by the horror of a monstrous lack of worldly affect in response to human actions rather than the monstrous effects of human action. This horror is embodied through the glowing geography of Area X (a never identified coastal region in a never identified nation) that has mysteriously enveloped a degraded and denuded tract of coastline and erased the effects of centuries of human colonization and activity, transforming it into a “pristine

wilderness” (155). Described to the general public as the site of an environmental disaster, the researchers at the Southern Reach facility are keenly aware of Area X’s true nature and they regard it as a site of a “terroir” (217) terror—a place which repels human knowledge, human agency, and human domination—perhaps hinting that they are all one and the same. Unlike much popular speculative fiction, that momentarily challenges, but eventually affirms notions of progress, positivism, and anthropocentrism through epic choreographies of human triumph over the Other and the unknown, Area X eludes all organized efforts to understand, displace, or destroy it. Divided into three sections titled “Annihilation,” “Authority,” and “Acceptance,” *Area X*, depicts a place metaphorically “right in our backyard” that is an affront to human power through: its elision of quantitative modes of understanding facilitated by technical prostheses; its autonomous governing of its unstable borders; its indifference to human difference; its colonization of human bodies and minds “from the outside in, forcing you to live in its reality” (72); its assimilation of human artifacts; its creation of human-animal hybrids and production of eerie doppelgangers. Area X inverts 21<sup>st</sup> century ecological realities in favour of “the final humbling of the human condition” where “the trees and birds, the fox and the rabbit, the wolf and the deer [...] reach a point at which they do not even notice us, as we are transformed” (412).

Singular among its cast of characters stands the “biologist,” a woman searching for answers about personal questions, who maneuvers through Area X’s inhuman territory as one member of a reconnaissance expedition comprised of specialists from different fields. She is recruited for the 12<sup>th</sup> (and final) formal expedition because of a lifetime of failed attempts to perform competently as a scientist—failures that stem from her inability to participate in aspects of social meaning-making or perform acts of human empathy that would be considered obligatory, if not basic. The primary narrator of *Annihilation*, she reveals aspects of her

unorthodox stance towards understanding stating “I don’t require any of this to have a deeper meaning. I am aware that all of this speculation is incomplete, inexact, inaccurate, useless. If I don’t have real answers, it is because we still don’t know what questions to ask. Our instruments are useless, our methodology broken, our motivations selfish” (127). This orientation ironically positions the biologist as potentially capable of understanding Area X with greater lucidity than her many expedition predecessors (a possibility deduced by the director of the Southern Cross facility who recruits her). Indeed, once inside its shimmering boundaries she diverts from research protocols and enacts questionable tactics for relating with its landscape by partially rejecting objectivity and evoking the inclination of a younger iteration of herself who “eschewed books on ecology or biology” and wanted to “discover the information on my own first” (30). Recognizing instruments were of limited value inside Area X, her natural curiosity and willing defiance of prescriptions results in the biologist’s incorporation of alien spores that begin to alter her body and senses, and consequently, change her perception of the world around her. Performing a “methodological” approach predicated on a negotiated affinity and unscientific intimacy with the environment, she willingly breaches and disposes of conventional boundaries that firmly distinguish the human from the non-human. Consequently, she outlasts her cohort of researchers, watching as they, one by one, are unwillingly transformed, consumed, or driven mad by contact with Area X’s contents.

Finding herself alone, she declines attempting to escape via the route she entered and ventures deeper into the “beautiful desolation” (4). Keenly aware that she is becoming irrevocably altered, the biologist actively postpones her corporeal assimilation through committing small acts of physical violence against herself. These minute gestures retard the rate

of metamorphosis, enable her to endure exposure to the alien landscape, and eventually, to approach a space of acceptance and even closure.

Observing all of this has quelled the last ashes of the burning compulsion I had to know everything...anything... and in its place remains the knowledge that the brightness is not done with me. It is just a beginning and the thought of continually doing harm to myself to remain human seems somehow pathetic... Will I melt into this landscape or look up from a strand of reeds or the waters of the canal to see some other explorer staring down in disbelief. Will I be aware that anything is wrong or out of place? (128)

Her words are prophetic, and she is indeed encountered again in “Acceptance,” book three of the trilogy. After an intentionally prolonged 30-year residency within Area X she eventually surrenders her human shape and identity and becomes a monstrous composite entity:

The suggestion, far to the east, already overshooting the lighthouse, of a vast curve and curl of the mouth, and the flanks carved by dark ridges like a whale’s, and the dried seaweed, the kelp, that clung there, and the overwhelming ocean smell that came with it. The green-and-white stars of barnacles on its back in the hundreds of miniature craters, of tidal pools from time spent motionless in deep water, time lost inside that enormous brain. The scars of conflict with other monsters pale and dull against the biologist’s skin. It had many, many glowing eyes that were also like flowers or sea anemones spread open, the blossoming of many eyes—normal, parietal, and simple—all across its body, a living constellation ripped from the night sky [...] the biologist now existed across locations and landscapes, those other horizons gathering in a blurred and rising wave. (493)



Reading the *Southern Reach Trilogy* in the midst of performing my research I was reminded of a much less dramatic, but nevertheless meaningful congress with Otherness that occurred during a SSDHS/CORD dance studies conference held in Athens, Greece in 2014. Taking a break from the dynamics of the conference I visited an historical site known as the Pynx.<sup>80</sup> There I encountered and followed a pack of stray dogs—nonhuman beings consciously engaged with each other and their immediate environment and mostly, but not entirely, indifferent to me—beings who transformed my perception of myself, the Athenian landscape, and the human, all too human, terrain of dance studies. Lacking owners, subjected to numerous social ills and physical afflictions, and living lives visibly untouched by many of the conventions of the pet culture of the West, it is possible that I could have just seen these ‘pariah dogs’ and departed Athens, like so many of the visitors to this arid metropolis, with a deep sense of pity for creatures tragically denied the pleasure of ‘forever homes’ in the company of specific North American humans. Instead, I left the much heralded (and often disputed) birthplace of Western culture with questions about nonhuman subjectivity, nonhuman choreographies, and the potential for nonhumans to alter my perception of the world and of the meanings embedded in movement.

Practically indecipherable in terms of specific lineages and ancestral origins, these hybrid bodies offered occasional flashes of setter, spaniel, shepherd, and hound as they adeptly navigated the long grass, windswept stones, and detritus of history. How different these creatures appeared from their North American counterparts whose territory is more likely the linear and flattened aseptic surfaces of apartment or home, the tiny enclosed backyard with decoratively placed foliage, the hard, often salt encrusted, concrete sidewalk, and the enclosed, socially and politically policed dog park. How different these creatures appeared from the sedentary academics at the conference, as they scrambled joyously up the steep slopes together,

collectively orienting themselves to the offerings of the land around them. They were apathetic to the blinding bleached urban vista, the crumbling monuments and eroded remains of antiquity, the fading graffiti-covered reminders of the Olympics, the political posters and pamphlets about ‘austerity,’ and perhaps most significantly, the numerous human bodies seeking cultural enlightenment, historical understanding, touristic entertainment, and social diversion. Unlike the companion canines populating Toronto, beings connected to human owners by so many visible and invisible threads, these Hellenic mongrels existed on their own terms in a space that was intimately intertwined with human history and human bodies. Moving without domestic allegiance to any one particular human’s moods, words, values, or body, they defiantly inhabited urban worlds qualitatively different than the ones experienced by their counterparts in Canada.

That afternoon I left well-worn human paths occupied by many of my academic colleagues and followed this pack of skilled pariahs as they wove along routes otherwise invisible to my senses. My brief interspecies apprenticeship continually hinted at the functional and affective differences and similarities between our bodies, and I glimpsed the borders of lives propelled and mobilized by scents, sounds, sensations, and forces existing beyond my immediate perception. Although the philosopher Ludwig Wittgenstein once stated that “if a lion could talk we could not understand him” (Wittgenstein 1953 223), these dogs were continually speaking to me through their bodies’ movements. Scrambling alongside them in “world vividly alive with visual forms” (Ness 1992 10), it was obvious there was much I could learn and unlearn. These animals were obviously conscious and skilled inhabitants of a very different Athens and emissaries of a space with new rhythms, sensorial dimensions, perceptual horizons, and bodily affects. Their trajectories and locomotor rhythms spoke simultaneously to different abilities, orientations, and worldly affinities *but also indicated potential opportunities* for momentary,

corresponding articulations between us at particular moments in time and space. This day on the Pynx was a glowing embodied manifestation of the choreographies of convergent and divergent relations that are always unfolding within different sensorial territories.

Walking back to the conference, I was consumed by ideas about the nonhuman and the choreographic. What sort of politics were enacted by the bodies and movements of these subjects? What sort of embodied meanings and “thinking in movement” (Sheets-Johnstone 2009a [1981]) were happening, not just on the dusty slopes of the Pynx, but all around me, all the time? How do these all these nonhuman choreographies challenge, complicate, and problematize the conceptual frameworks that dance studies has created and championed?

## **AUTHORITY**

In “Can George Dance: Biosemiotics and human exceptionalism with a lyrebird in the viewfinder” (2018) Australian musicologist Hollis Taylor reveals many dimensions of the shaky anthropocentric edifice that dance studies operates within. Taylor’s essay begins with a description and brief analysis of a dance performance by George, an Albert’s lyrebird. However, Taylor’s interest “is not with the multimodal communication motives and functions of George and his avian audience” (61). Instead, she proposes that George’s dance can be used as a “springboard for shedding light on human signifying practice—specifically, for how humans make sense of avian dance, how they compare and contrast it with human dance, and, to add one more difficulty, what a definition tells us about its makers” (62). Over the course of the essay, Taylor explores and catalogues “objections from both the natural sciences and the humanities to the contention that animal movements could fruitfully be considered as dance” (63). These objections are:

1. The “Humpty Dumpty” objections, which negate animals’ ability to “dance, where it (and other arts) are imagined as inherently, essentially, and solely human” (63).
2. The “erroneous” objections, which employ “broad, sweeping statements about animal capacities” (63), including their ability to learn, transmit information, or possess a sense of culture, in order to negate their potential to engage in a complex cultural activity.
3. The “illogical” objections, which “deliberate on specific properties of dance” or “dilute or bypass appraisal in favor of personal and institutional interests and theories” (64). Within this framework, animal movements “may be critiqued negatively for being too simple, too brutish, too repetitive—and thus not aesthetic”, while “more complex animal movements may be met with a classificatory roadblock, apparently deployed as a shield to avoid confronting accomplishment” (64). Herein, judgements “of animal dance are routinely marred by a Eurocentric cultural bias and the illogical expectation of one-on-one equivalence” (65).
4. The “instrumentality” objections, which “conjecture that animals only participate in aesthetic practice for instrumental purposes” and “is next-to-impossible to disprove” (65).
5. The “intentionality” objections, concerned “with cognitive processes that ostensibly underpin dance (consciousness, intention, and language)” (66), which, rather “than assessing an animal’s achievement by what is available to a human observer” (66), assess intentionality as a means to determine if an activity is dance, “make a second-class citizen of embodied experience” (67), and privilege language as a “mode of communication” (68).

Although her work is broadly focused and examines objections to the existence of animal dance from scientists, musicologists, philosophers, anthropologists, and art theorists, the ideas of many dance scholars or intellectual figures influential within dance studies contexts are examined. Among them are sociologist Marcel Mauss (1992), aesthetic theorist Betty Redfern (1998), dance/process philosopher Susanne Langer (1953), dance anthropologists Joann Kealiinohomoku (1983 [1970]), Judith Lynne Hanna (1996 [1979]), and Cynthia Novack (Berkman 1999), theatre scholar Roger Copeland (1983), and philosopher of art Marshall Cohen (1983). Taylor emphasises that their different implied or overt objections are part of “partial, contested, unproven, or disproven assessment of both human and animal dance, and they betray the tendency to put theory ahead of empirical scrutiny and embodied experience, the bias of low expectations, and the hegemony of Western culture” (68) and states that: “Nothing about dance logically and incontrovertibly leaves animal activities out of the ambit of its definition if evaluations are movement-based” (68).

Referencing numerous distinguished scholars from biosemiotics, ethology, and philosophy, dance figures purged from dance studies’ canon (Sachs 1938 [1933]) due to charges of ethnocentrism or the utilization of “evolutionary thought” (Buckland 2014 173), and even quotidian applications of the term ‘dance’ to define animal movement on platforms such as YouTube, Taylor finds that “both ‘everyday’ and scholarly accounts that acclaim a trans-specific exchange of an intermingling of meanings find much in common with the biosemiotic approach, which cleaves to an evolutionary perspective of continuity” (72). In contrast, other accounts, such as those produced by the dance scholars she references, “evinced scare quotes; thin, clinical language; word choices that suggest exotic alterity; and/or separate terminology for similar human and animal activities” (72). Taylor emphasises that they also:

Betray different values and registers of meaning: perhaps a cleaving to (or a pressure to cleave to) the scientific method or an avoidance of the anthropomorphic label; or even a habit that is culturally maintained (like the continuation of the mechanistic view towards animals), an aesthetic bias, or a coolness to the fundamental category of wonder—to speculate on just some among many possibilities. In any case, these eschewals perpetuate the realm of human uniqueness. (72)

For Taylor, by “extending our viewfinder beyond the human, cultural creatures like George can provide us with new semiotic resources for constructing a less-distorted version of the multimodal behavior that we call dancing” (72).

Taylor articulates her nuanced argument from beyond the pale of dance studies, and she is obviously not interested in venturing inside its disciplinary boundaries to engage with the history or politics informing the definitions or figurations of dance that she critiques. Refreshingly, she merely examines the internal inconsistencies that inform various objections to animal dance. This is a tactical maneuver that can likely only be executed by a figure operating outside of dance studies. The extent to which objections to these sorts of gestures are cemented into the firmament of dance studies as a field, discipline or subdiscipline can be partially glimpsed through a close reading of sections of a contemporary lecture on animals and dance presented within a dance studies context.

In 2016, interdisciplinary scholar Jane Desmond, a figure once central to, but now operating on the margins of the dance studies, delivered a colloquium lecture at Temple University (2017 [2016]). Her lecture was predicated on outlining the opportunities for dancers

and dance scholars to explore and engage with aspects of the nonhuman. Desmond's discussion of animals in dance was delivered in three overlapping parts:

1. an introduction to the conceptual landscape of the nonhuman turn and posthumanism, prefaced by a screening of a viral YouTube video of a cockatoo named Snowball dancing to the Backstreet Boys (BirdLoversOnly 2007), which outlined a constellation of contemporary work by scholars contributing to these paradigms. Works referenced include: Cary Wolfe's *Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory* (2003), Alexander Weheliye's *Habeus Viscus: Racializing Assemblages, Biopolitics, and Black Feminist Theories of the Human* (2014), Mel Chen's *Animacies: Biopolitics, Racial Mattering, and Queer Affect* (2012), Samantha Frost's *Biocultural Creatures: Toward a New Theory of the Human* (2016) Jane Bennett's *Vibrant Matter: A Political Ecology of Things* (2009), and, Eduardo Kohn's *How Forests Think: Toward an Anthropology Beyond the Human* (2013).
2. a discussion of the emergence of human-animal studies from within traditional humanities disciplines with a focus on Una Chaudhuri's and Holly Hughes *Animal Acts: Performing Species Today* (2014), a text that Desmond states, "opens the door to dance and dance studies...when she frames her topic in terms of embodiment" (2017 00:26:10-00:26:18) and, finally,
3. the sketching of a "brief, provisional taxonomy of ways that dances and dancing have or might grapple with the interspecies realm" (00:27:41-00:27:49) generated through "shifts in propositions that denote relationships: Dancing *by* animals; Dancing *with* animals; Dancing *as if* representing or inspired by animals; and

finally, Dancing *in a multi-species more-than-human world*” (00:27:55-00:28:12). During this sketching Desmond references diverse phenomena including circus acts, renaissance horse ballets, Olympic dressage, Croft’s dog show, whale performances at SeaWorld, human-dog merengues, Bill T. Jones’ *Last Supper at Uncle Tom’s Cabin/ The Promised Land* (1990), Indigenous Eagle Dances, ballet works such as *Swan Lake* (1875-1876), *The Dying Swan* (1905), and *Firebird* (1910), ragtime social dances, 1960’s social dances including ‘the pony’ and ‘the funky chicken,’ American concert choreography including Martha Clarke’s *Endangered Species* (1989), Ann Carlson’s *Animals Series* (1986-1989) and *Animal Dance* (2016), Jennifer Monson’s *BIRD BRAIN* (2000-2006).

Overflowing with historical and contemporaneous examples of the influence and appearance of animals within diverse multicultural dance practices and performances, Desmond indeed offers many avenues for dance scholars to rudimentarily grapple with the nonhuman turn. However, what is particularly interesting about Desmond’s rich lecture is that she omits any discussion of the complex history of the animal within dance literature and literature that influenced dance theories—where the figure of the animal, or a figuration of the human as an instinctual animal being, are present (and evoked in both positive and negative ways) in works that reference: mimesis and imitation (Aristotle 1961; Noverre 2004 [1760]; Cohen 1983; Oesterley 2016 [1923]; Kirstein 2015 [1935]), magic (Frazer 1890; Kirstein 2015 [1935]); cultural and biological evolution (Spencer 1950 [1857]; Darwin 1981 [1871], 2015 [1872]; Hudson 1895 [1892]; Wallaschek 2018 [1893]; Vance 1893; Grove 1895; Scott 1899; Crawley 1911; Ellis 1983 [1929]; Valéry 1983 [1964]; Sachs 1938 [1933]; Sebeok 1979; Lange 1975; Francis 1991; Sheets-Johnstone 1983, 1990); embodiment and metakinesis (Martin 1939); psychology (Köhler



1959 [1923]); play (Huizinga 1955 [1938]; Laban 1960 [1950]; Caillois 1961 [1958]); communication (Frisch 1966 [1953]), sexuality (Ellis 1983 [1929]); consciousness (Kleist 1983 [1810]; Langer 1953); intentionality (Kealiinohomoku, 1983 [1970]; Hanna 1996 [1979]); the symbolic use of language (Williams 1986, 2004 [1991]); and, the socially constructed nature of art (Redfern 1998). Within this literature the figure of ‘the animal’ *evolves* from an imitative or foundational figure before and during the early 20<sup>th</sup> century, to a deeply problematic figure in the mid-twentieth century, to a contested, obsolete, or even taboo figure by the beginning of the 21<sup>st</sup> century.

I interpret Desmond’s omission as informed, conscious, diplomatic, and part of an attempt to intervene into the human terrain of dance studies without “ruffling the feathers” of professional scholars and students working in a field that consciously shed its animal skin, and gradually, for political and social reasons, positioned dance as “uniquely situated in the human body” (Novack 1990 14). Engaging intently with work from this legacy would necessitate re-confronting issues of implicit or explicit racism, sexism, and naturalism, identified and critiqued at length by prominent dance scholars (Youngerman 1974; Kaeppler 1978; Kealiinohomoku 1983 [1970]; Williams 2004 [1991], 1986; Grau, 1998; Buckland 2014), and perhaps even addressing the problematic nature of dance studies’ avid promotion of primarily social constructionist, and even culturally deterministic, orientations towards scholarship.

Thus, Desmond slyly invites her audience to *consider* the animal within the context of dance, rather than *reconsider* it. Signs of Desmond’s attempts at measured diplomacy are evident throughout the lecture. At the outset of the lecture Desmond states

The question I want to pose here *together* is this: what can happen when we bring the intellectual energy of the so-called nonhuman turn to meet dance studies and dance

making in the studio? This talk is meant to be *speculative*, to think out loud, to do more work in raising questions and in charting potential intersections and rubbings-up-against and lines of flight, than in presenting findings, offering prescriptions, or attempting to exhaustively chart an extant terrain. In other words, I'd like to have a *conversation* with you. And what I've done, because of the *opportunity* that you folks have given me with this *invitation* is to try to bring together some *disparate parts of my life* and my work. So, this is my first take, and I hope we will have a vigorous and ongoing conversation as you *help me* develop these ideas. (emphasis added) (00:1:10-00:2:08)

Desmond's language is inflected with personal modesty—she has been given an opportunity and is there because of an invitation. Despite her extended involvement in dance studies, she is no longer an internationally recognized specialist, but rather, needs help to “bring together disparate parts” of her life. Furthermore, her talk is characterised as a “first take,” “speculative in nature,” and part of a “conversation.” Deemphasizing her vast knowledge, Desmond tactically over emphasises the ability, knowledge, and awareness of her audience. Momentarily including herself within the fold of dance researchers again, she states

As dancers and dance theorists all of us here share a deep engagement with human physicality. We inhabit its cultural variations, its extraordinary richness, its power, its pathos, its deep satisfactions and challenges as a mode of expressivity, a mode of knowledge, of interaction, and of being in the world. We are in all our ways deeply attentive to embodiment, as praxis, as politics, as materiality, and as epistemology. A way of knowing and of being in particular historical worlds. (00:2:10-00:2:46)

This rhetorical tactic is repeated throughout the lecture. Immediately following the video screening of Snowball's dance, Desmond states

As dancers and cultural theorists of course, we know that the category of dancing is a highly variable one and those actions that get denoted by the term depend on specific historic circumstances and arise always within specific communities. For the scientists though, the search for origins for cultural practice in biology, especially neurobiology, has a lot of traction right now. While problematic in that these science reports erase cultural specificity, social history, and politics—that is the basis for the arts including dance we might say—such claims do successfully further decenter the presumed exceptionalism of humans. (00:6:38-00:7:18)

Later, during the outlining of her taxonomy, after introducing the category of “Dancing Animals: animals who through their own volition spontaneously move in ways that are deemed by some humans to fulfill the characteristics they associate with the conceptual term of dance” (00:28:16-00:28:28), Desmond overtly states “I place ‘dance’ here in quotation marks, as I noted about Snowball, to underline what we all already know—that the range of movement practices that are categorized as such varies widely across time, across cultural groups, institutions, and types of events” (00:28:29-00:28:44). In both of these moments Desmond explicitly refers to the knowledge/wisdom possessed by dance studies researchers and implicitly gestures towards a conventional figuration of dance as a human cultural phenomenon. Rather than characterising Snowball’s dance as an event that problematizes both dance studies’ figuration of itself and its reification of binary divisions between nature and culture, and then poignantly asking her audience to reconsider their own participation in this paradigm, she instead characterises scientists’ work, and by extension, popular discourse on the phenomena of dancing animals as “problematic.” Thus, Snowball is not situated as emphatically participating in a human cultural activity called dance or possessing any knowledge or abilities that would enable

him to do so. Instead, he is characterized as perceived as “dancing” by scientists, with this perception being reduced to part of a scientific agenda for “evolutionary origins of purposive rhythmic movement to music” (00:28:58-00:29:03). Desmond’s own critical distance from Snowball’s dance is specifically emphasized by mention of her intentional use of quotation marks—a device that Taylor explicitly referenced within her analysis of objections to animal dance.

Fascinatingly, Desmond makes a considerably different claim in *Displaying Death and Animating Life* (2016), a book published earlier the same year that she presented this lecture. In *Displaying Death and Animating Life*, Desmond investigates the artmaking practices of animals, and specifically asks the question “What happens when the use of quotation marks, the ‘wink’, attached to the category of animal ‘art’ disappears?” (199). This question is followed by a lively discussion informed by a nuanced understanding of art as a social category, case studies of different artmaking animals including turtles, primates, and elephants, and specific scientific studies of animal cognition. Reflecting on this discussion, Desmond states, with regard to the artistic efforts of apes:

these primate-produced paintings come strikingly close to the status of “artwork” as a visual representation produced for the pleasure of looking at it or of making it, but not for a utilitarian reason. These works seem to combine a sense of mark making with imagination, resulting in a product that is then perceived as “art” by someone else, thus completing the hermeneutic circle uniting perception with interpretation. (216)

Ironically, neither Snowball, nor his dance, are discussed in Desmond’s book, but he is an interesting case to consider—not only because humans have been so willing to see him as a dancing being, but because the movement history fragmentarily outlined by neuroscientist

Aniruddh Patel and his colleagues in “Experimental Evidence for Synchronization to a Musical Beat in a Nonhuman Animal” (2009) implies a process of enculturation and inter-species participation. According to Patel, Snowball’s “movements during synchronization appear not to be simple copies of movements typically found in the natural repertoire of sulphur-crested cockatoos” (828) but rather, he learned to dance through his human family’s dancing with “pronounced arm gestures” (829) *after* they noticed his deliberate movement to human music. Thus, Snowball’s dancing is an outgrowth of a process of Snowball making choices about his movement in relation and response to humans. His dance involves the conscious creation of an analogous movement vocabulary fashioned from a very different animal body. This *intentional* process takes Snowball’s dancing away from a specifically “natural” realm associated with species-specific courtship dances and display behaviour that make Snowball’s dance instinctual, and away from a “cultural” realm associated with human training that make Snowball the subject of human agency and training procedures. Clearly Snowball comprehends aspects of “human” conceptions of rhythm and performance, and consequently, he can both hear human “music” and participate in human “dance.”

Shifting Desmond’s observations about animal art into the context of Snowball’s dance, a dance that balances on the margins between the human and nonhuman and kinaesthetically blurs the constructed gulf between nature and culture, her statement could be *rearticulated* as: *this avian-produced dance come strikingly close to the status of “dance work” as a kinetic performance produced for the pleasure of looking at or of doing it, but not for utilitarian reasons. This dance seems to combine a sense of movement making with imagination, resulting in a performance that is then perceived as “dance” by someone else, thus completing the hermeneutic circle uniting perception with interpretation* (adapted from Desmond 2016 216).

This rhetorical move was available to Desmond at the time of the lecture, but it was conspicuously absent. In a lecture devoted to scholarship that decenters the human, Desmond appears to perform a diluted version of this gesture that deemphasizes considerations of nonhuman agency and intentionally omits concentrated attention to the implications of research she is keenly aware of that positions animals as both cultural beings and subjects.<sup>81</sup> However, appearances can be deceiving, and when Desmond's typology is subjected to scrutiny, it appears she is quietly advocating for a position towards animal scholarship just as radical as Taylor's. As stated earlier, Desmond's provisional typology is comprised of four categories: "Dancing by Animals;" "Dancing with Animals;" "Dancing as if representing or inspired by animals;" and, "Dancing in a more-than-human multi-species world" (2017 00:27:55-00:28:12). In the first three categories, the animal is either perceived, trained, or referenced by human beings, sits outside a figuration of the human, and is a subject of, or subjected to, human practices or treatments. However, within the category "Dancing in a more-than-human, multi-species world" (00:28:08-00:28:12), the human and the animal influence and relate to one another in a more fluid manner and it could be argued that this category is in fact a container for the other three categories, as, once situated inside it, the human becomes just one species of animal among many. Through this "tactical" maneuver, Desmond slyly inserts an idea, that if comprehended, assimilated, and accepted, undoes a certain anthropocentric logic, for, as feminist philosopher Elizabeth Grosz states in *Becoming Undone: Darwinian Reflections on Life, Politics, and Art* (2011):

The human, when situated as one among many, is no longer in the position of speaking for and authorizing the analysis of the animal as other, and no longer takes on the right to name, to categorize, the rest of the world but is now forced, or at least enticed, to

listen, to respond, to observe, to become attuned to a nature it was always part of but had only aimed to master and control... (24)

When comparing Taylor's and Desmond's tactics towards broaching the subject of the animal within a dance context, I respect Desmond's diplomatic maneuvering, as well as Taylor's definitively more direct approach. I find both, if dance research can be envisioned as a place, juxtapose "diverse elements in order suddenly to produce a flash shedding a different light on the language of a place and to strike the hearer." (de Certeau 1988 [1984] 37-38).

## **ACCEPTANCE**

Both Desmond's and Taylor's work resonates with Elizabeth Grosz's clarion call to "inquire into the inhuman—in all its rich resonances" (2010 [2007] 00:47:58-00:48:03) and develop "a way of understanding the entire world from other principles than those which have dominated up till now" (00:46:30-00:46:35), enunciated during her keynote address at Duke University's 2007 Feminist Theory Workshop. Over the course of the keynote, Grosz articulates a conception of feminist research that advocates strongly for developing research orientations which stress congress with the world. She concludes her talk with the following utopian vision:

So, I dream of a future feminist theory in which we no longer look inward to affirm our own positions, experiences, and beliefs—but outward to the world and to what we don't control and understand in order to expand, and not confirm, what we know, what we are, and what we feel. Feminist theory can become the provocation to think otherwise, to become otherwise. It can be a process of humbling of the pretensions of consciousness to knowledge and mastery and a spur to stimulate a process of opening oneself up to the

otherness that is the world itself. At its best, feminist theory has the potential to make us become other than ourselves—to make us become unrecognizable. (00:49:07- 00:49:57)

Earlier in the keynote, Grosz makes several statements and asks a number of probing questions about “a subject” which disrupt a certain intellectual ecology that imagines human subjectivity as either autopoietic or autonomous from the environment around it:

The subject does not make itself. The subject indeed does not know itself. The subject seeks to be known and to be recognized—but only through its reliance on others including the very others who function to collectively subjugate the subject. So, we need to ask with more urgency now than in the past: if the subject strives to be recognized as a subject of value in a culture which does not value that subject in the terms that it seeks—what is such recognition worth? [...] And, once the subject is recognized as such, what is created through this recognition? To focus on the subject at the cost of focusing on the forces that make up the world is to lose the capacity to see beyond ourselves to engage with the world to or to make the real. We wait to be recognized instead of making something or inventing something which enables us to recognize ourselves, or more interestingly, to abandon recognition altogether. I am not what others see in me. I am what I do and what I make. (00:42:48-00:44:03)

When I read these words, I reflect on myself, and I also think about the larger “subjects” of dance and dance studies in the context of the academy. I have definitely felt the pressing need to be *recognized as a subject of value*. I have also, when *recognized as such* within dance and dance studies contexts felt myself losing the *capacity to see beyond* and the ability to *engage*



*with the world*. I have also read histories documenting the efforts of individuals who desperately needed to make dance *recognized as a subject of value in a culture which does not value the subject in the terms that it seeks*. What has been *created through this recognition*? At very least, I see evidence of an intellectual ecology in which, much as Joann Kealiinohomoku reported over half a century ago, scholars are still, although in a different way, “not interested in the whole world of dance,” but rather “only interested in their world of dance” (Kealiinohomoku 1983 [1970]).

Science fiction author Iain M. Banks’ *Culture* novels are set in a post-scarcity society that appears, in many ways, to be the utopic realization of the peace, prosperity, identities, and freedoms envisioned possible by contemporary liberalism. Through technological means, citizens of the Culture: are unencumbered by labour or servitude; can be reincarnated or preserved in stasis indefinitely; are genetically enhanced so that they live lives of indeterminate length; change sex at will; control their own moods through the secretion of chemicals from drug glands; maintain their physiology and form so that they appear as they wish; and, switch off pain. The Culture has no formal laws, and societal norms are enforced primarily by conventions relating to reputation, manners, ostracism, and, when appropriate, permanent supervision by the sentient, god-like machines that regulate and maintain society. Rather than living on actual planets, the multispecies citizens of the Culture reside primarily on massive ships or within the safety of artificial structures called “habitats.” The conflict within many of Bank’s novels emanates from the Culture’s interaction with other cultures because, although it is a society that purportedly recognizes, encourages, and celebrates all difference, it is only able to value the types of differences that it already recognizes, encourages, and celebrates. In situations when the Culture encounters an alien society that does not conform to, mirror, or complement its ideology,

the freedom and peace-loving society secretly deploys various explicit or implicit forms of violence to erase, contain, or control that society's difference. Thus, it seems the Culture novels are an extended philosophical study of the inherent contradictions immanent within the liberal humanist framework.

In the novel *Excession* (2002 [1996]), readers are introduced to an offshoot branch of the Culture called the "Zetetic Elench," a fragmented group that parted from, yet still retains more-or-less friendly contact with the Culture. Within Bank's narrative, the Zetetic Elench are reported to have

spent many thousands of years pitting themselves against every kind of technology and every type of civilizational artifact the vast spaces of the greater galaxy could provide, seeking always to understand rather than to overpower, to be changed rather than to enforce change upon others, to incorporate or share rather than to infect and impose. (18)

Consequently, in contrast to citizens of the "Culture" living in their zoo-like habitats within a society that "aimed to stay roughly as it was and change at least a proportion of those lesser civilizations it discovered" (88), the Elencher "wanted to alter themselves, not others; they sought out the undiscovered, not to change it but to be changed by it...It was a search for the sort of pan-relevant truth that the Culture's monosophical approach was unlikely ever to throw up" (88-89). The term "Zetetic Elench" is comprised of two root words: "zetetic" is defined, when used as an adjective, as: "proceeding by inquiry or investigation" and is derived from the Greek ζητεῖν, "to seek" ("Zetetic"). "Elench" is defined as "that part of an argument on which conclusiveness depends; that which convinces or refutes an antagonist; a refutation," and, simultaneously as "specious, but fallacious argument; a sophism" ("Elench").

Considering that my work emerges from the academic fields, disciplines, or subdisciplines known as dance studies and zoo studies, and uses personal investigations and creative inquiry to refute or challenge aspects of those fields' dominion and providence through a product that might be a "specious, but fallacious argument" or "sophism," the title of "Zetetic Elench" seems appropriate to define what I now recognize as an orientation towards research in artistic and academic contexts. The experience that has been this dissertation research has, like the biologist in VanderMeer's story, led me to negotiate a path between terror and wonder in a glowing landscape of ideas and experiences where I was gradually becoming conceptually unrecognizable. This journey has, in some ways, "quelled the last ashes of the burning compulsion I had to know everything...anything" (127). It has also been both a "humbling to the pretensions of knowledge and mastery" (Grosz 00:49:33-00:49:4) and a "spur to stimulate a process of opening" myself "up to otherness" (Grosz 00:49:40-00:49:44) in the form of nonhuman life. Because I have, in dialogue with human and nonhuman Others, created *inventions* that allowed me to recognize myself becoming unrecognizable, I am now able to understand my body, my artistic and academic practices, and my poise towards other human and nonhuman beings in completely different terms than how they existed at the of beginning this process. And so, to "ape" Elizabeth Grosz, I dream of a future where, within the "Culture" known as the academy, others are able, and encouraged, to inquire experientially, adapt and create methodologies, and use their own apprehensions of whatever external forces are felt in the worlds they inhabit or interact with, to shift perceptions of bodies, practices, and disciplines so they are better adapted to the act of articulately, not just speaking about the world's worlds, but dwelling within them.

## NOTES

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<sup>1</sup> These animals include: algae, elephants, penguins, cats, coral, gorgonians, polyps, cicadas, agoutis, rabbits, serpents, cockatoos, coral fish, octopuses, mosquitos, hornets, guppies, nuthatches, toucans, jellyfish, whales, dolphins, horses, calves, mice, robins, pigeons, chickens, dogs, tigers, bluebirds, skunks, clams, cobras, monkeys, tadpoles, storks, water buffalo, moths, quetzals, impalas, black-necked cranes, foxes, ostriches, oysters, birds-of-paradise, chimpanzees, gorillas, wildebeests, hyenas, lemurs, parrots, eagles, elk, peregrine falcons, seabirds, squirrels, deer, caterpillars, and racoons.

<sup>2</sup> My research period coincided with a period of major labour disputes at the Toronto Zoo. These disputes between zookeepers and management that eventually resulted in an extended strike. My research was also complicated by a long (6 month) delay on my ethics approval due to the approval forms being misplaced. Because of these “problems” I eventually abandoned the formal interviews with zookeepers that I had planned in favour of multiple informal discussion with zoo staff during exhibition hours. In this case my “problems” became “opportunities” to engage differently.

<sup>3</sup> The idea of the zoological “landscape immersion” was developed by Grant Jones of the landscape architecture firm Jones & Jones (Hancocks 2002 118). According to Hancocks, aspects of immersion included “no sense of separation between animals and people” (118) and the blurring of “barriers by putting the same landforms and planting in both the public and the animal area (118). The intention of immersion “was that by exhibiting animals in landscapes that closely resembled their natural habitat in every possible detail and by immersing the viewer within the same wild habitat, people would subconsciously make connections between the interdependence of certain animals, plants, and habitats (118). According to zoological designer John Coe, these exhibits appealed “first to the emotion and second to the intellect” (qtd. in Hancocks 118).

<sup>4</sup> In the 20<sup>th</sup> century authors have published specialist zoo literature about animal husbandry, captive behaviour, and enclosure design as well as works with more popular appeal which give autobiographical accounts of their experience working with animals at the zoo, explain zoo history and highlight the increasing importance of the zoo as a conservation space, or make claims which relate animal behaviour in the zoo to human culture. Examples of these sorts of works are Carl Hagenbeck’s *Beasts and men: Being Carl Hagenbeck’s experiences for half a century among wild animals* (1912), William M Mann’s *Wild Animals in and out of the Zoo* (1930) Heine Hediger’s *Wild Animals in Captivity* (1950), *The Psychology and Behaviour of Animals in Zoos and Circuses* (1968), *Man and Animal in the Zoo: Zoo Biology* (1969), Lee S. Crandall’s *The Management of Wild Mammals in Captivity* (1964), Desmond Morris’ *Naked Ape* (1967), and *The Human Zoo* (1969), Gerald Durrell’s *Overloaded Ark* (1953), *My Family and Other Animals* (1956), *A Zoo in my Luggage* (1960), *Island Zoo :The Animals a Famous Collector Couldn’t Part with* (1961), *Look at Zoos* (1961), *The Stationary Ark* (1976), *Ark on the Move* (1982) and *The Ark’s Anniversary* (1990), James Fischer’s *Zoos of the World* (1966), Wilfred Blunt’s *The Ark in the Park: The Zoo in the Nineteenth Century* (1976), Peter Batten’s *Living Trophies* (1976), David Taylor’s *Doctor in the Zoo: The Making of a Zoo Vet* (1978), Lord Zuckerman’s *Great Zoos of the World: Their Origins and Significance* (1980), Robert Bendiner’s *The Fall of the Wild, The Rise of the Zoo* (1981), Sally Tongren’s *To Keep Them Alive: Wild Animal Breeding* (1985), and Colin Tudge’s *Last Animals at the Zoo: How Mass Extinction Can Be Stopped* (1992). An extensive list of zoological literature from 1883 to 1995 written by Key Kenyon and entitled “Why Zoos?: A Bibliography” and can be found online at: [http://webapp1.dlib.indiana.edu/virtual\\_disk\\_library/index.cgi/4274266/FID1577/CAREPDF/WHYZOOS.PDF](http://webapp1.dlib.indiana.edu/virtual_disk_library/index.cgi/4274266/FID1577/CAREPDF/WHYZOOS.PDF)

<sup>5</sup> In Kellert’s typology human attitudes towards animals were categorized as “Naturalistic,” “Ecologistic,” “Humanistic,” “Moralistic,” “Scientistic,” “Aesthetic,” “Utilitarian,” “Dominionistic,” or “Negativistic.” (Kellert, 1976, 1980).

<sup>6</sup> Ludwig finds significant differences between the perspectives of junior and senior workers, management and zookeepers, staff and volunteers - perspectives that are shaped by education, responsibilities, experience, and backgrounds. The greatest contrast in perspectives is between the public and the zoo workers. This is due to the

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former's expectations of amusement and entertainment that are historically intertwined with the zoo enterprise and the latter's daily investment in the care, and consequently, the actual lives of their charges.

<sup>7</sup> In considering this paradox, Ludwig proposes several changes that zoo organizations could make to minimize internal contradictions which include: limiting zoos to domesticated animals; removing larger animals from the setting; displaying empty cages; and perhaps most radically, making the effects of captivity on animals and the differences between wild and captive animals an explicit educational focus. His paper concluded with the statement that his study: "has stressed the value conflicts and dilemmas that arise from the very nature of zoos. Most will agree that zoos can no longer justify themselves on the basis of the amusement function alone, yet neither the attitude of the public nor the set-up of most zoos permit them to be the educational institutions that more legitimately justify them" (316).

<sup>8</sup> Such as (updated for 2005 edition): There is "little evidence that zoos are successful at educating people"(135) ; Many zoos "make no attempt at education" (135); Most of the educational benefits of zoos could be obtained by "presenting videos, lectures, and computer simulations" (136); "Couldn't most of the important education objectives better be achieved by exhibiting empty cages with explanations of why they are empty?"(136); Very few zoos support any real scientific research (136); "There is no reason to believe that better, fuller or more accurate data can be obtained in predator-free environments than in natural habitats" (137); "The fact that zoo research contributes to improving conditions in zoos is not reason for having them" (137); "much of what has been done in using zoo animals as models for humans seem redundant or trivial" (137); "Although our quest for knowledge for its own sake is important, it is not important enough to overcome the moral presumption against keeping animals in captivity" (138); Zoos "continue to remove more animals from the wild than they return"(138); The "lack of genetic diversity among captive animals is a serious problem for zoo breeding programmes" (138); Zoo breeding programmes "create many unwanted animals" (139); is it better for animals "to live in artificial environments of our design than not to be born at all" (140); "If our main concern is to do what we can to preserve endangered species at any cost and in any way, then we should support such large-scale breeding centers rather than conventional zoos, most of which have neither the staff nor the facilities to run successful breeding programs" (141); "captivity does not just deny animals liberty but is often detrimental to them in other respects as well" (49); There is "widespread malnutrition among zoo animals"(142); There are "high mortality rates from the use of anaesthetics and tranquilizers"(50); There are "serious injuries and deaths sustained in transport" (142); There are "frequent occurrences of cannibalism, infanticide and fighting almost certainly caused by overcrowded conditions" (142); "Morality and perhaps our very survival require that we learn to live as one species among many rather than as one species over many. To do this, we must forget what we learn at zoos. Because what zoos teach us is false and dangerous, both humans and animals will be better off when they are abolished" (142).

<sup>9</sup> Thus, Tuan's history of zoos begins with archeological evidence from Egypt's Old Kingdom (2500 BC) which depicted collared animals including addax, ibex, gazelle, oryx, monkeys and hyena. Historical documents also indicate the existence of more-or-less stable collections of animals officiated over by Queen Hatshepsut, King Solomon, King Hiram of Tyre, the founder of the Ch'in dynasty, Frederick II, kings and nobles of the "European Middle Ages," the great abbey of Saint Gall, and the Aztec ruler Montezuma (69-80).

<sup>10</sup> Specifically, Mullan and Marvin discuss different conceptions of "wild" animals, the paradox of displaying "wild" animals in captivity, the distinct ways animals are named in zoological contexts (i.e. scientific, popular, and individual) (8-10), the use of animals in human dramatizations within animal shows (such as Shamu) (16-23), and the "juvenilization" (24) of animals in contemporary culture through the application of anthropomorphic neotenic imagery. Highly indebted to the pioneering animal studies work of British philosopher Mary Midgely (1978) (7), the five categories of anthropomorphism developed by Randall Lockwood (13), Konrad Lorenz's concept of neoteny (24), and Ramona and Desmond Morris's detailed work on the anthropomorphic appeal of the giant panda (26-28), Mullan and Marvin outlined the many anthropomorphic entanglements between humans in and outside zoo culture. Less studiously examined though was the critical possibility of zoomorphism, referenced in passing and reduced to the fare of sociobiologists' "freely interchanging terms drawn from studies of both human and animal behaviour" (30).

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<sup>11</sup> Observations from Michel Foucault's, *Madness and Civilization* (1961) and *Discipline and Punish: The Birth of the Prison* (1975) feature prominently within the chapter as Mullan and Marvin stress connections between the containment of the "animality" of madness and the containment of animals, and between the disciplinary design of Bentham's radical Panopticon and the "design of the menagerie built for Louis XIV at Versailles" (43). Another focus of the chapter is the creation of "docility" (38) through institutional practices. Adapting ideas from Russel Barton's "1959 study of institutional neurosis in the asylum" (38) Mullan and Marvin outline the production of docility in zoo animals through their separation from natural habitat, enforced idleness, direct control by humans, loss of life in normal social groups, medical care and fertility control, and artificial caging. The chapter concludes with the observations that, despite the recent reforms of zoological design in which the "prison like qualities" are removed, "the animals must none the less be contained" (44) and that "in the prison there is no attempt to pretend that the inmates can live a normal life, whereas in the zoo this is exactly what some director's think they can achieve for those in their care" (44).

<sup>12</sup> Throughout the chapter the authors highlight the monolithic yet changing culturally-induced face of architecture at the zoo, architecture that "has to be created for two sets of creatures" (47). Stressing that each design "represents a product of human thought and culture and whether conscious or unconscious these designs are expressive.... of how the natural world is to be presented (47). Numerous examples of different culturally-influenced design formats were analysed including: the "maximum visibility" (47) of bare early zoo design which promoted the impression of the dangerous animal; the human cultural elements of colonial zoo design which promoted the impression of the "exotic" (48) animal; Carl Hagenbeck's influential "open-air panoramas with concealed moats" which "blurred the edges of human and animal worlds (51)"; and low tech and high tech contemporary designs demonstrative of "ethological and ecological context" (53) which aim to directly immerse the viewer in an environment and "take people to a nature they have probably never seen by bringing nature to them and fashioning it in a form which is hoped will both entertain and instruct" (56). Mullan and Marvin also discussed the gulf between western zoos and their less affluent counterparts in cities such as Shanghai, Lima, and Kuala Lumpur noting: "in a sense a reversal has taken place. In the nineteenth and twentieth centuries European zoos expropriated the cultures of colonized nations in the form of zoo architecture; nowadays western nations are able to impose a standardized western design concept on other countries. Moreover, it seems that such colonized nations themselves do not make use of their own cultural artifacts nor those of alien nations to frame their own exhibits. There are no Hindu temples in Indian zoos, or pagodas in Japanese ones, and the only case known personally to the authors of a mosque in an Islamic zoo was one in Ragunan Zoo, Jakarta, where it was used for its proper purpose – religious devotion" (57). The chapter concluded with a discussion of influential landscape design firm Jones and Jones' immersive Gorilla habitat for the Seattle's Woodland Park Zoo and a comparison of that work with the design of the naturalistic safari-inspired San Diego Wild Animal Park. Both spaces were critiqued as places consciously designed to shape human perception that enable visitors to 'fantasize that they're in Africa' (66) although they are, in both cases, in the United States. However, in the case of the San Diego Wild Animal Park, the exhibit organization "is such that it is they, the humans, who are controlled rather than the animals" (67).

<sup>13</sup> Mullan and Marvin refer to David Hancock's *Animals and Architecture* (1971) which offers a typology which classified the logic behind specific designs as: "Systematic" i.e. taxonomically based staging, "Zoogeographic" i.e. geographically-based staging, "Habitat" i.e. environmentally-based staging, "Popularity" i.e. human response-based staging and "Behavioural" adaptation-based staging (69).

<sup>14</sup> Through reference to zoological literature, different institutional structures, and the design of specific exhibits several aspects of zoological staging are discussed including architect and zoo designer David Hancock's "five basic patterns of zoo displays" (69-70), the public's experience of animals through differences in general spatial proximity and degrees of contact – factors which affect the relative perception of "wildness"; the curation of animals and assessment of their relative "exhibition value" (73) according to type, origin and indigeneity, charisma, activity level and behaviour, size, shape, cultural associations, and rarity; the replication of natural spaces according to human perceptions of them, the relationship between wildlife films and contemporary zoo design; theatrical aspects of zoo spaces including their stage and backstage components and "props" in the form of behavioural enrichment; wildlife

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tourism and the differences between the visitor and the naturalist; and, the use of “increasingly sophisticated environments” (84) and in some cases robotic animals, which “become greater objects of attention and admiration than the animals themselves” (84).

<sup>15</sup> The chapter transitions into a discussion of “a period in which humans also constructed settings for the display of fellow human beings” (85) - the exhibition of human beings in zoos and colonial exhibitions in the nineteenth and early twentieth centuries; Correspondingly, Mullen and Marvin stress connections between the cultural origins of the people displayed besides, alongside, and with animals at zoos and exhibitions, and their significance as both performative spectacle and literal embodiment of the colonialist, imperialist and capitalist tendencies of the era.

<sup>16</sup> The chapter utilizes historical sources and examples mentioned by both Berger, Tuan, and Ritvo but enunciates a history which examines the differences between different documented animal collections, and their overlapping historical foundations - sacred menageries, early menageries, princely collections, scientific collections, and public zoological institutions. Sacred menageries are exemplified by particular animal collections in ancient Egypt and Greece, the collection of Aztec ruler Montezuma, and the Buddhist monastery of Theyboon in Burma. In these instances, the animals are not explicitly collected for display but rather, because of their “religious significance” - either as religious icons, or as religious sacrifices. Early menageries are exemplified by Egyptian collections of Tuthmosis III and Hatasou, the parks of Chinese emperor’s Wen Wang and Chi Hang-ti, Kublai Khan, Roman *vivaria* and the collections of Emperor Trajan and Octavio Augustus. In these instances, the animals are related directly to the power of specific rulers and their interest in hunting, trade and diplomatic tributes, and in the case of Rome, spectacular entertainment for their subjects. Princely collections are represented by the collections of Charlemagne, Frederick II, Henry I, Henry III, Italian merchants and nobility such as the Duke of Calabria, Pope Leo X, Pope Benedict XII, Cardinal Hippolytus Medici, Rene Count of Anjou. These animals are related to curiosity, “prestige, luxury, and love of display” (96). The menageries at Versailles and Schönbrunn are referred to as “special cases” and the menagerie of Montezuma receives its own section. The scientific collections are represented by the Jardin des Plantes, Muséum National in Paris, Zoological Garden in Regent’s Park, Royal Zoological Society of Ireland, and King Juan’s collection in Belem. The animal in these collections are regarded as scientific specimens and scientific curiosity is the focus (89-115).

<sup>17</sup> Written before the recent reimagining of the art gallery and museum as places of leisure and entertainment, Mullan and Marvin contrast the zoo’s persisting connections with cultural complexes of family entertainment and leisure with the gallery’s and museum’s associations with personal contemplation, serious study, and quasi-religious sentiment. Historical distinctions are also drawn between the zoo’s display of natural species with the art gallery and museums display of singular cultural objects. When these observations are compounded with studies of zoo visitor’s knowledge, concerns, and focuses, the zoo and its modes of narrating nonhuman life emerge from their analysis as “a theatre of inauthenticity attempting to tell a story of authenticity” (130).

<sup>18</sup> Like Berger, Mullan and Marvin relate early animal trade to diplomatic relations, a situation where the animal is characterized as a tribute. This practice slowly develops into a small *live* animal trade economy involving “only a few individuals” (137) mediated by the actions of companies such the Dutch East India and Dutch West India Companies. Hence, although “there obviously were animal suppliers prior to the nineteenth century, it is only at that time we find specialists of the stature and importance of Hagenbeck, who became the leading animal dealer in Germany, and the prominent London-based dealers Charles and William Jamrach” (137). Exploiting the perceived “unlimited supplies of wild animals together with the lack of any conservation ethic” (137) the animal trade booms in the late 19<sup>th</sup> and early twentieth century. Correspondingly, there is little interest in or a perceived need for animal breeding efforts within zoos, and very limited “inter-zoo trade” (138). This situation shifts after the Second World War when there develops a “growing consciousness that wildlife itself is under threat and that many species are vulnerable to extinction” (138). In response to this awareness individual zoos attempt to develop breeding programs and cooperate with other zoos, with the “aim being to avoid creating a drain on the population of wild animals” (138). The situation changes considerably on March 2<sup>nd</sup> 1973 when eighty nations sign the Convention of International Trade in Endangered Species of Wild Fauna and Flora (CITES). CITES regulates “trade in both live and dead animals” (139) and under CITES species receive considerably more protection than before, a situation which both stimulates elite zoological institutions to “become their own suppliers” (148), and less reputable

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commercial zoos to enlist the services of the black-market animal trade. Insidiously, the protection of endangered species and the reproduction and display of endangered animals within zoological gardens stimulates the further removal of rare or endangered animals from native habitats. Thus, Mullan and Marvin demonstrate the shadow side of captive breeding programs, and, in light of this, ask “why is it that we need zoos to reproduce themselves anyway?” (150).

<sup>19</sup> This includes the colonial agenda and colonial roots of conservation, the interpretation and implementation of conservation by former colonial cultures, animal conversation as a movement motivated by human desire rather than animal need, the “architecture of guilt”(158) that structured the zoological enterprise, and the zoological endgame when “there will in time be a repository of permanent populations of ‘zoo animals’ which are structurally equivalent to wild populations even though they are in an important sense thoroughly culturized” (158).

<sup>20</sup> *Zoo Culture*, in its entirety, neatly delineated a future playing field for a “zoo studies” to engage with. However, its concluding remarks may be indicative of the author’s conscious attempts to halt the game altogether: “Giraffes do not naturally belong in the middle of Tokyo, nor polar bears in Washington and certainly not lions in Copenhagen, but unfortunately for the humans seem to need them there and, furthermore, can command them to be there. In zoos man has been able to go beyond nature and transform it, to alter the natural distribution of animal species such that there are now populations of animals existing completely outside their natural environment. This relationship of the human to the animal world has taken different shades of meanings in different cultures and different eras but, at the most basic level, zoos are institutions of power, in that they reflect the uniquely human ability to hold in captivity and dominate large numbers of diverse wild animals for the purpose of human enjoyment and human benefit. The zoo constitutes a gallery of images constructed by man. The fact that he is able to arrange around him living creatures from all parts of the world, to make decisions with regard to the quality and condition of their lives and to give shape to the world for them in terms of his imagination and desire is, in the end, an expression of power” (160).

<sup>21</sup> However, not all zoo scholarship was written under its glow. Stephen St. C Bostock’s *Zoos and Animal Rights: The Ethics of Keeping Animals* (1993) provides an alternate vision of the zoo through its exploration of the ethics of historical, contemporary, and even future animal keeping. A student of pioneer animal scholar Mary Midgely with a background in philosophy and zoology, Bostock’s intent is to “examine some of the ethical issues raised by the never-ending debate over zoos” (x), an examination which also necessitates a pragmatic appraisal of the works of Berger, Ritvo and Mullan and Marvin. A key aspect of Bostock’s methodology is to make distinctions between zoos where animals were indeed in a state of abject captivity, and other zoos where animals “enjoyed good physical health, and in which their lives were peaceful and, in many cases, organized in societies clearly similar to those they would have in the wild.” (47). Much like other zoo scholarship, Bostock begins his book with a historical overview of collections of animals. However, Bostock’s chronological account was internally divided into discrete sections and examined different historical animal keeping practices and is accompanied by a historical analysis of the shifting meaning of terms such as “wild”, “domestic”, “cruelty,” and “captivity”. Bostock’s history strives to identify ethical frameworks for the ways that animals had been kept differently during different periods and specifically highlighted the radical evolution of the modern zoo in the latter half of the 20<sup>th</sup> century into “an artificial environment, but one, nevertheless, which provides (or certainly should provide) its main requirements and has indeed various advantages over life in its wild habitat.” (48). Bostock’s main contribution to Zoo Studies is his philosophic consideration, undertaken in a methodical fashion, of the different ways that captivity, cruelty and freedom has and is framed by scientists, philosophers, academics and zoo abolitionists and his positing of methods for assessing animal well-being, understanding the differences between human captivity and animal captivity at elite institutions, and evaluating the potential value and even necessity of historical, current, and future zoo based conservation efforts in an environmentally threatened world. Bostock is critical of zoological specialists, such as Heini Hediger, who claim animals in the wild are not free, zoo advocates, such as Micheal Boorer, that claim that modern human beings are actually not free either, veterinarians such as John Webster who minimize the challenges of responding to animals, zoo abolitionists, such as Bernard Rollins, who conflate human and animal rights, and academics such as Mullan and Marvin and Harriet Ritvo, whose critical and monolithic analyses of “power and domination” (59) are, when examined, a “wild exaggeration” (63). Emerging from Bostock’s study are conditional claims which consider, in the face of escalating environmental degradation, a particular animal’s well-being, the



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wellbeing of particular species, and the merits of particular institutions and particular conservational and educational initiatives. In reduced form these claims can be stated as: that *some zoos could* be a place to keep *some animals*, that *some animals could* lead engaged lives at *some zoos*, that *some animal species could* benefit from *some conservation efforts organized by some zoos*, and that *some people could* actually be educated in *some ways at some zoos*. In the introduction to the 2019 publication *Zoo Studies and a New Humanities*, Bostock's text is referred to as "dated." I never got this impression.

<sup>22</sup> These include the work of Edward Albee, Virginia Wolff, Kurt Vonnegut, Rainer Rilke, Marie Nimier, Jean Stafford, e. e. cummings, Sylvia Plath, Clarice Lispector, Ted Hughes, Isaac Babel, Eugene O'Neill, Russell, John Irving, Alberto Moravia, Franz Kafka, James Dickey, Haruki Murakami, Conrad Aiken, Roddy Doyle, Brigid Brophy, Henri Cole, Jean Stafford, William Carlos Williams, Alberto Moravia, Countee Cullen, E.F. Benson and E.L. Doctorow.

<sup>23</sup> The first period (1500's-1700's) is dominated by a "passion for collecting" (15) and the authors outline aspects of menagerie culture including the cultural diffusion of the menagerie model throughout European nations, the aristocratic focus on trophies and curiosities, and the mixture of baroque scenography with concepts of pleasure. The second period, one in which scientific concerns are paramount (1800's) is characterized by "the need for control" (17) and authors outline the "invention of the zoo" (73) by a scientifically focused elite, imperial conquest, nature as a site of exploitation, and the masculinist thrill of hunting. The third and final period (1900's), is associated with "the yearning for nature" (199) and the authors document the birth of the public zoo, the ascendancy of illusion within the zoological space and the eventual "imitation of nature" (265).

<sup>24</sup> Desmond states: "In the simplest cages, bodies themselves are presented as 'facts'. The animals are there and we stare at them. The representational medium that structures zoo viewing becomes more and more apparent when the display context becomes complex, presenting a simulacrum of origin. Then the goal is not to show bodies, but to show bodies in motion and in (selectively engineered) ecological context" (150-151).

<sup>25</sup> Desmond structures her study by considering a "continuum of natural viewing experiences" (152) ranging from ecotourism sites to zoos to shows at animal-based theme parks - each reveals a different harnessing of animal bodies to varied human cultural agendas.

<sup>26</sup> Desmond states: "To own 'the other' and to subject it to a particular theatrical aesthetic enact a politics of vision based on differential hierarchies of power. The underlying structure still forms the basis of zoos and animal shows, but its negotiation, meaning, and particularities of enactment are always subject to change and contestation" (155).

<sup>27</sup> In the first stage "barred cages were usually arranged along both sides of a pathway, so the visitors could stroll through the living taxonomy arranged one species per cage" (160) an arrangement which "reflected older notions of the natural sciences as a cataloguing of differences" and "encouraged people to talk, look, and stroll and focused the attention of the viewers as much on their own social interactions as on the animals" (161). The second stage "focused on the clinical health needs of the animals and reflected a more scientific approach to zoo keeping" (161). The third stage, initiated by Carl Hagenbeck, emphasized naturalism and key conceptual components were an "unobstructed view, movement, the illusion of freedom and natural habitat, and a privileged point from which all is visible" (163). Stage four extended a relational notion of "environment to that of habitats, surroundings that would be behaviorally satisfying to the animals" (163) and generated the illusion "not only of authentic animals but authentic performances of species-specific behaviour as well" (164), an exhibition style reflecting "a conception of human and nature relationship shaped by the popular ecology movement and by the growth of ecology as a science during the last thirty years" (165).

<sup>28</sup> Desmond states that mammals are "like us, they have intercourse, give birth to babies, nurse them, have warm blood, and have skin/fur analogous to us. Most of them like lions, tigers, bears, elephants, hippos, and giraffes, also have facial structures that look like ours, with recognizable noses, eyes on the front of rounded skulls, ears, and mouths with at least a suggestion of lips". (166). In contrast to mammals, Desmond finds "the hard-shelled bodies of crustaceans in general, like the thorax-abdomen divisions of insects - or the cold-bloodedness and scales of reptiles,

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are...incomprehensible from the perspective of our sensory imagination” (167). However, as in the case of jellyfish “sometimes the radical difference can become a draw in itself, especially where it can be successfully transmuted in display from ‘ugly’ to aesthetically pleasing” (167). In these cases, animals are appreciated only as objects and spectators do not “identify them as sentient beings” (168). In part, these bodily distinctions and phylogenetic affinities provided the conceptual framework for different displays Desmond examined that highlighted anthropomorphized individuals, unique species, or, alternately, “constituent parts of a larger whole.”

<sup>29</sup> The term “Anthropocene” was popularised by atmospheric scientist Paul J. Crutzen in 2000 (Dawson 2016). The term is used to designate a global epoch or era characterised by massive anthropogenically induced change as a result of industrialization and human action. Other terms for this period have also been proposed (Haraway 2015).

<sup>30</sup> Keekok Lee, by far, has the most charming and cheeky conclusion to a zoological study: “It may well turn out that ordinary zoo visitors are more insightful about the true nature or ‘essence’ of zoos than the noble-minded advocates of such institutions in the name of education-cum-conservation. It is no wonder that such missionary zeal, on the whole, leaves them unaffected and passes them by – rightly, they concentrate on what they have come to zoos for, namely, to see and be amused/entertained by live exotic animal exhibits in pleasant naturalistic simulated enclosures. Good wholesome recreation and fun to be had by one and all in the family. This is not to be sneered at, especially when the satisfied customers appear not to have been taken in by the zoos’ own mistaken and misleading spiel that the animals they exhibit are wild” (117).

<sup>31</sup> Ames states: “If the name Hagenbeck no longer resonates throughout the universe, it is also more than just a memory. Even today, we are surrounded by forms of theme space and immersive environments that bear the imprint of his legacy” (229).

<sup>32</sup> Interestingly, the concept of the “Earth Trust” inverts aspects of Raymond Moriyama’s original conceptual designs for the Metro Toronto Zoo outlined in the *Metropolitan Toronto Zoological Park Feasibility Study and Master Development Plan* (1968). In Moriyama’s vision the zoo would have a high-density central core surrounded by circles of lessening density which became more and more “natural” and where the animals exist in increasing degrees of freedom (16-28).

<sup>33</sup> Please see Michel Foucault’s *Security, Territory, and Population: Lectures at the Collège de France, 1977–1978* (2007).

<sup>34</sup> In “Panda Gardens and Public Sex at the National Zoological Park” (2010), Uddin considers *queer* aspects of zoological staging. Uddin states that urban nature “despite all its prevailing cultural politics, can unsettle as much as verify the sexual order of things” (90).

<sup>35</sup> For more information on the mimicking of natural gorilla group social structure in zoos that participate in the Gorilla Species Survival Plan (SSP) please see *The Gorilla Species Survival Plan* website at <http://gorillassp.org/Home>.

<sup>36</sup> Thinking with Benedict Anderson’s (2006) discussion of imagined communities, these imaginary landscapes, too, have very real dimensions and implications.

<sup>37</sup> The name of the town was Breese.

<sup>38</sup> *Something Wicked This Way Comes* (1964) is a novel set in a small American town that is visited by a demonic circus. The main characters are two young boys who live in the Midwest.

<sup>39</sup> “Hinterland Who’s Who” are a series of 60-second public service announcements profiling Canadian animals, produced by Environment Canada Wildlife Service and the National Film Board of Canada in the 1960’s and 1970’s. They were “re-launched” by the Canadian Wildlife Federation in the 2000’s without the flute music. The

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flute music was, however, used as sound material by the electronic music group “Boards of Canada” in their 1998 album *Music Has the Right to Children*.

<sup>40</sup> These books included *The People of the Deer* (1952), *Lost in the Barrens* (1956), and *Never Cry Wolf* (1963)

<sup>41</sup> Also see Pink (2011 and 2010) for further discussion of the relationship between movement and knowledge production. See Macpherson (2010) for discussion of body-landscape relations.

<sup>42</sup> The monorail at the Toronto Zoo was closed in 1994 after two separate accidents that occurred in 1991 and 1994. Plans for a new monorail at the zoo have recently been approved (Chan 2018).

<sup>43</sup> John Urry (1992) examines the role of the visual in tourism. He argues that tourist experiences are highly mediated through visual consumption, and tourist sites (such as zoos) “paradigmatically involve the collection of signs” (1992 172)—metaphoric, symbolic and actual. Building from Urry I suggest these signs mark what is “worthy of being gazed upon” (173) and guide the visitor in the moment and thereafter (through the use of photo-souvenirs, or mementos). Also see: Hall (1997); and Little (1991).

<sup>44</sup> On the day I visited the zoo in order to take the photographs for this chapter the incline proved too much for a mother with a stroller and I assisted her on her upward trek.

<sup>45</sup> See Dean MacCannell (1973) for a discussion of the search for authenticity—which he argues, is a prime motivation for sightseeing. Also see William Cronan (1996) on ideas and experiences of “real” nature.

<sup>46</sup> For a more focussed study of the “Knowledge Trail” please see Danielle Lorenz’s master’s thesis *Walking the Noble (Savage) Path: The Didactics of Indigenous Knowledge (Re)Presentation in the Toronto Zoo’s Canadian Domain* (2012). I discovered this document while formatting this dissertation and it includes an extended treatment of details of the space and an informed discussion about representational problems with the space.

<sup>47</sup> Examples of this sort of treatment of the North are

<sup>48</sup> The words “True North Strong and Free” are part of the lyrics of the Canadian national anthem “O Canada,” written by Adolphe-Basile Routhier in 1880. The lyrics were originally articulated in French.

<sup>49</sup> As a backdrop, the concept of area of focus becomes “landscape” in a way that renders it subject to visual consumption as if framed for a photograph, as Urry (1002 178) suggests, and influences imaginaries about a sneak-peak into wild, untamed nature just beyond the viewpoints.

<sup>50</sup> Raymond Moriyama’s original 1968 plans for the Toronto Zoo are outlined in the *Metropolitan Toronto Zoological Park Glen Rouge: Feasibility Study and Master Development Plan*. Moriyama describes what has become the “Canadian Domain” as the “Animal Domain” (26). Moriyama states: At the edge of the plateau heavily wooded slopes drop into the valley 100 to 150 feet below. There are some remarkable lookout points, but the topography imposes a severe limitation on the mass movement of pedestrians. For the valet of the west branch of the river we propose what we have called the “Animal Domain”: an area of 600 acres devoted to native Canadian animals, having free run of the valley with limited pedestrian access. This is a logical use since the flood threat limits the use of shelters, and animals must be able to withstand the local climate, and free to move to higher ground in case of flood (26). When describing the contents of the “Animal Domain” Moriyama states: The animal domain is essentially a low density display, limited by the capacity of vegetation to withstand traffic and browsing. The river will be dammed to form a large pond but otherwise the area will be left undisturbed. Moose, elk, caribou, muskox, bison and smaller mammals such as raccoons, and porcupines would roam freely, together with geese swans, ducks and pelicans. The predators, including foxes, lynx, bobcats and bears will be in moated displays as part of the North American section on the tableland (26). The future visitor experience for the visitor is also described by Moriyama: “The feeling of a natural community is an experience rarely offered by zoos. The Animal Domain will be a place of discovery for those who are willing to explore on foot. In order to give the area maximum exposure some form of internal transportation will be essential. The monorail we propose is quiet and unobtrusive, and the elevated track will not interfere with the movement of animals (28).

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<sup>51</sup> The idea that nature is seen as an exploitable resource is presented by Urry (1992 178) as well.

<sup>52</sup> *Tim Hortons* and *Old Spice* are two companies that immediately come to mind, but the “nature” of these adds is also rapidly changing to reflect a more diverse consumer base.

<sup>53</sup> This bird’s eye view improves upon the vision once granted by the “Canadian Domain’s” monorail.

<sup>54</sup> So, while gesturing to the (colonial) myth of a “virgin”, “untouched”, “uninhabited” landscape, the exhibit simultaneously undermines its own nostalgic fantasy with its curation. See William Cronan (1996) on the conceptualization and construction of “wilderness” and its many mythologies.

<sup>55</sup> Kenneth Little (1991) describes this as a framing strategy that stages a particular story for the visitor. This story, Little argues, follows a larger “master trope or mythology” (151) in their manufacture of the spectacle, which I argue is materialized for visitors of the Toronto Zoo by the intimacy and immediacy of walking.

<sup>56</sup> See Cronan (1996) on the values and meanings attached to ideas of “wilderness.”

<sup>57</sup> This is a reference to John Berger’s and Mike Dibb’s “Ways of Seeing” BBC televised documentary series (1972). The series examined ideological ideas imbedded within historical and contemporary visual culture.

<sup>58</sup> In Berger’s “Why Look at Animals?”, Randy Malamud’s *Reading Zoos* (1998), and Robert Mullan and Gary Marvin’s *Zoo Culture* (1999), lack of movement, stereotypic movement, or the unnatural behaviour of animals are referred to as indicators of the false nature of the zoo environment. Similarly, critiques of zoos in newspapers and magazines also routinely refer to the obvious limits on animal movement present at zoos.

<sup>59</sup> In *Zooland: The Institution of Captivity* (2012), Irus Braverman discusses the zoo environment in light of Foucault’s concept of pastoral power and refers to the bodily training of animals by humans for the purposes of multispecies care; In Traci Warkentin and Leesa Fawcett’s chapter “Whale and Human Agency in World-Making: Decolonizing Whale-Human Encounters” from Ralph Acampora’s *Metamorphosis of the Zoo: Animal Encounter after Noah* (2010) the authors discuss choreographic modes of interaction between populations of captive and “wild” cetaceans and humans; Present in the same collection are also Chilla Bulbeck’s “Respectful Stewardship of Hybrid Nature: The Role of Concrete Encounters” and David Lulka’s “Boring a Wormhole in the Zoological Ark,” both of which examine the zoo as space with kinaesthetic components that extend beyond the visual. Significantly, modes of, and opportunities for, animal movement are often addressed in scientifically oriented zoological publications. David Hancocks (1971, 2017) and Jon Coe (2012, 2015) are two influential zoological designers who make animal movement a focus of their work and suggest creating artificial habitats for animals with natural components which enable opportunities for “natural” movement and behaviour.

<sup>60</sup> Please see Mullan and Marvin (1987), Desmond (1999), Malamud (1999), as well as many of the chapters in Acampora (2010).

<sup>61</sup> While training at the School of Toronto Dance Theatre lions would often be evoked during my Graham-based training. Although often the “lions” would be evoked as hunting or searching in the wild it is debatable if any of my instructors had seen them in that environment. Thus, an idealised figure of the lion, and many other creatures including eagles and snakes, have become folded into the pedagogical structure of the technique. Within ballet technique, specific exercises have titles which refer to specific animals. Examples of these include “pas de cheval” (horse) and “pas de chat” (cat).

<sup>62</sup> For a more extended examination of Merce Cunningham’s interest in animals please see Carrie Rohman’s *Choreographies of the Living: Bioaesthetics in Literature, Art and Performance* (2018). Rohman focuses on Cunningham’s drawings of animals printed in the book *Other Animals: Drawings and Journals* (2005).

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<sup>63</sup> For a longer discussion of Forti's work and its close relationship to animals and zoos please see Julia Bryan-Wilson's "Simone Forti Goes to the Zoo" (2015) in *October* no.152, pp. 26-52.

<sup>64</sup> According to Richard Grusin, author of *The Nonhuman Turn* (2015), the "nonhuman turn" refers to late 20<sup>th</sup> century and 21<sup>st</sup> century movement within the humanities, social sciences, and arts which veered away from social constructionist theories and towards philosophies which complicate divisions between human and nonhuman, decenter or reframe the human and foreground the agency of nonhumans. Included within its heterogeneous fold are the fields of animal studies, object-oriented ontology, and new materialism.

<sup>65</sup> I repeatedly retraced our initial route, making a detailed list of all inhabitants of the zoo's exhibit areas in the order I encountered them. I checked my lists against zoo signage and with information available on the Toronto Zoo website. Predictably, this information often did not align with my list (i.e. my list containing more species than the zoo's virtual catalogue of animals, yet still fell short of the zoo's advertised claim to house 460+ species). Realizing that I would have to make some concessions to the reality of studying an ever-shifting institution which displayed live bodies, I synthesized my personal observations and the official zoo information. This choice addressed the reality that not all animals were on display (or in the same area) each time that I visited due to the vicissitudes of health, curatorial choices, and seasonal weather conditions. Recognizing that there were animals I had seen that Danielle had not, I supplemented the score with video footage of these absent animals in two cases. This footage was embedded into another document sourced from online videos from YouTube that was imagined as serving as a memory aid and an imperfect solution to the problem of an ever-shifting population of zoo inhabitants. Preference was given to virtual footage of animals at the Toronto Zoo and when this footage was unavailable concerted efforts were made to avoid spectacular or dramatized documentary footage which depicted animal behaviour absent from the zoo environment. It was rarely, if ever used by Danielle.

<sup>66</sup> Patricia Beatty's dance works with environmental themes include *Gaia* (1990), *Seastill* (1979), and *Skyling* (1980).

<sup>67</sup> Patricia Beatty made repeated reference to "iconic" choreographers and artists including Jose Limon, Martha Graham, Pearl Lang, and Bertram Ross, figures who are routinely associated with American modern dance and whose works heavily invested in universal humanist subjects and transcendent values.

<sup>68</sup> CAZA refers to "Canada's Accredited Zoos and Aquariums," WAZA to "World Association of Zoos and Aquariums," and AZA to the "Association of Zoos and Aquariums."

<sup>69</sup> It is possible to make connections between the otaku and aspects of comic book, anime, science fiction, and video game fan culture in North America.

<sup>70</sup> Azuma's arguments are developed from prominent Japanese theorists including Otsuka Eiji, Osawa Masachi, Nakajima Azusa, and Okad Toshio (themselves indebted to Western scholars including Georg Wilhelm Friedrich Hegel, Alexandre Kojève, Jean-Francois Lyotard, Jean Baudrillard, Slavo Žižek, Peter Sloterdijk, and Jacques Derrida).

<sup>71</sup> These video games include *Yu-No*, *Kanon*, *The Scar*, and *Air*.

<sup>72</sup> These anime series include *Evangelion*, *Gundam Wing Mobile Fighters*.

<sup>73</sup> *Wildscreen Arkive* collected audio recordings, photographs and films of wildlife into a massive digital archive. *Wildscreen Arkive* "closed" officially on 15 February 2019.

<sup>74</sup> I have received training in Graham-based, Limon-based, Horton-based, Hawkins-based, Taylor-based, Cunningham-based, and Muller-based techniques in Canada as well as training in Graham technique, Limon technique, Horton technique, and Cunningham technique, and Taylor technique in New York City, United States. I

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have attended ballet classes at the School of Toronto Dance Theatre, the National Ballet School of Canada's general school, and in New York City.

<sup>75</sup> When I examine the superheroes in the comic books that I poured over in my youth (and still turn to as both a relief from, and inspiration for, my academic research), I see the anthropoplastic aspect of Marchesini's animal epiphany inflected in the bodies, abilities, and technologies of the "superhuman" characters, one in which the animal body is essentially emulatable and the human body mutable. Flight, super-strength, super-speed, organic projectiles, uncanny reflexes, exoskeletons, bodily regeneration, hiveminds, electrical generation, bio-luminescence, claws, super-hearing and vision, sonar, echolocation, wallcrawling, web-slinging, camouflage, pheromones, mimicry, chrysalis, sound generation, underwater breathing—all are ornamentations of the human body with abilities "borrowed" from animals (Marchesini 2017 113). Other "superpowers" speak to an extended global history with animals and are contemporary adaptations of previous cultural legacies from traditional stories, myths, and legends and the projections of previous subjects' understandings of their world—therianthropes in multiple forms, vampirism established through differing degrees and kinds of contact and proximity, animal summoning, animal communication, and animal control. Those characters possessing "archaic" technological bodily extensions such as armour, swords, chemicals, and poisons, can also be viewed as referencing the characteristics of members of the animal kingdom—the skin of the armadillo or pangolin, the claws and teeth of a tiger, the acidic spray of a bombardier beetle, and the venom of a spider, cobra, rattlesnake, or asp. Even the names of some heroes and villains speak to literal and metaphoric links with nonhuman creatures—Batman, Catwoman, Tigra, Black Manta, Black Mamba, Black Widow, Black Panther, Wolverine, Snowbird, Scorpion, Toad, Penguin, Wasp, Ant-Man, Vulture, Dr. Octopus, Lizard, Rhino, Raven, Mockingbird, Maggot, Hawk and Dove, Hyena, Anaconda, Tiger Shark, etc.

<sup>76</sup> Zoo designer John Coe envisions a zoo that uses to technology to give agency to animals in "What's the Next Generation Zoo? And Who's Even Asking the Question." (2015). He states: "Why can't monkeys (aided by training and smart gadgets such as those in advanced livestock and dairy industries) run the monkey house?"

<sup>77</sup> For Gibson: "The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill. The verb to afford is found in the dictionary, the noun affordance is not. I have made it up. I mean by it something that refers to both the environment and the animal in a way that no existing term does. It implies the complementarity of the animal and the environment" (1979 127).

<sup>78</sup> In "Understanding Dogs through Kinesthetic Empathy, Social Construction, and History" (1990), Kenneth Shapiro outlines aspects of what I would term a concentrated "somatic dialogue" with his dog Sabaka. Within the essay he refers to observations that change the way space and movement can be interpreted. He concludes that: "invitations to move and bodily sensibility are the basis of meaning in Sabaka's experience. For him, meaning does not occur in or consist of a semantic field, of, say, differences, similarities, and associations. Rather, meaning occurs in and is the context of possible moves; of possible ways of living and maintaining space, and, as the last reflection suggests, of forms of relationship with others. For Sabaka, meaning consists of and is known through bodily experience. To understand the complex, intimate, and wonderful choreographies of that world, it is helpful for an investigator to assume a posture of bodily sensitivity to it—to kinesthetically empathize with Sabaka" (195).

<sup>79</sup> Uexküll states: "We may say that an animal is able to distinguish as many objects as it can carry out actions in its environment" (96). Thus the "effect tones" are opportunities for specific kinetic actions and for particular types of engagement related to phenomena that are present. "Things" are only perceived if they can be associated with an action.

<sup>80</sup> The Pnyx is hill in Athens, Greece. It was the meeting place of one of world's first democratic legislatures.

<sup>81</sup> Desmond does refer to how animal research shifts perceptions of animals as subjects but does not forcefully address the inconsistencies of an anthropocentric social constructionist lens or locate science as a practice that produces universal "truths."

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## APPENDIX A

### *ARK*

#### *ARK VIDEOS:*

*ARK* March 2018: <https://vimeo.com/305091192>

*ARK* Annotated: <https://vimeo.com/295025952>

*ARK* Summer 2016: <https://www.youtube.com/watch?v=YJuL1wvbEnA&t=1s>

*ARK* May 2017: <https://vimeo.com/255658524>

#### *ARK SCORE*

##### CHILDREN'S ZOO (11 Species/Breeds)

Crested Seriemas: 4 back down diagonal chin/back softies with rebounds.

Guinea Pig: Snuffling.

Domestic Ferret: 3 tiny backward steps to corner, torso finishes facing right.

Domestic: Rabbit 3 eye/head shifts to right, torso match.

Groundhog: Paw mudra.

Abyssinian Hornbill: Turning around fluff ball, mudra disintegrates.

Raven: Stutter pecks forward with shoulder fluff to return.

Skunk: "Gallop and turn" swivel-ish.

Alpaca: Banking to the right leading with head, interrupted by.

Nubian Goat: Heavy udder feeling.

Nigerian Dwarf Goat: Little head shake right into 2 hops, focus stays.

##### EURASIA (15 Species)

Giant Salamander: Thighs come together as mouth closing eats.

Giant Panda: Imprinting shape of panda on needle wall stage right.

Barbary Sheep: 2 hoof steps and a heavy bearded face.

Red Panda: Goopy lower legs and shiver upper body.

Bactrian Camel: Hump gets heavy, fall down stage right diagonal, nostril (body) closes, waist as desert landscape w/5 camels.

Yak: Heavy hair grows everywhere in spiraling downward patterns, deliberate step on right leg.

Mouflon: Tilt body left, hip leads around corner into unsynchronized steps.

Przewalski's Horse: Leading with belly button, wrap around other horse and press into, feel wind.

Steller's Sea Eagle: Feel wind, guided by right wing/arm, small turn to downstage right corner facing.

Eagle Owl: Opposite corner, turn head, turn body.

Snow Leopard: Feel tiny snow leopard climb body, zoom in, head and tailbone form leopard and curl around each other.

Chamois: Hip points reference gait.

Tur: Trace/become each horn, originating in center of body.

Barbary Ape: Be the tree swaying in the wind that ape is sitting on.

Dhole: Hands and feet are each one dog in a pack, bobbing/prancing, at once, then same direction at once.

## AUSTRALASIA (56 Species)

Matschie's Tree Kangaroo: Feel joey.

Kookaburra: Lookup diagonal, dive down forward, small lunge.

Red-tailed Black Cockatoo: Extend head to spiraling front right diagonal arch. Add crooked, contract tail forward.

Victoria Crowned Pigeon: Left hand is pigeon crown quivering.

Galah: Knee is bird drinking.

Tawny Frogmouth: 3 head ticks to up r, shifting on relevé little fourth.

Green-winged Dove: Pitch.

Crested Pigeon: Come to flat back, foot hops different directions.

Blue-faced Honeyeater: Ribcage spirals up, drag leg along.

Little Pied Cormorant: Head reached forward, then in line with spine, then rotates right.

Fly River Turtle: Swim with scapula, homolateral with legs.

Frilled Lizard: Weird dance and sunbathing with beautiful scales.

MacLeay's Spectre: Feel bugs trembling all over you.

Thorny Devil: Fingers are mouth organs gripping branches.

Red Claw Yabby: Ribcage little legs.

Komodo Dragon: Tongue from right rib cage through arm, weighted deliberate step on right leg backwards, running loose pelvis.

Black Tree Monitor: Slow panoramic view to food (keeping pelvis running), dive/fall to right.

Red-bellied Short Neck: Back left leg paddle, interspersed with neck/chest breathing.

White-lipped Python: Cock into right hip (one leg) and sink alternating snake hips.

Emerald Tree Boa: Extreme yawn in front of right hip.

Green Tree Python: Tongue in right arm rotating back.

Bearded Dragon: Blow up chest back from heel.

Solomon Island Skink: Left knee toke.

Short-beaked Echidna: Smelling with back hip and retreating quickly into slow smelling again.

Southern Hairy-nosed Wombat: Wombat rotund body turn left.

Swamp Wallaby: Tuck under contraction knees forward, release pelvis forward, interrupt with upper body. contraction with small step forward.

Sugar Glider: Along right side of body arcing flying, other side feels it, allow to tilt to other corner

Solomon Island Leaf Frog: Right should blade sounding (retraction).

White's Tree Frog: Left ribs forward, undulating, contracting, bringing left leg up a bit. Under left elbow bops.

Great Barrier Reef Coral: Feel ALL the current on right leg.

Seahorse: Zoom into being a seahorse, wrap leg around, turn head from neck, hands are fluttering fins.

Lionfish: Sliding spines from the blades out in a V.

Semicircle Angelfish: Right elbow out in.

Brownbanded Bamboo Shark: Right leg through demi-pointe ripple.

Orange Lyretail: Chin neck up to the left.

Coral Beauty: Double shoulder pulse.

Blue-girdled Angelfish: Small retreat.

Yellow and Blueback Fusilier: Pelvis side to side.

Scribbled Angelfish: Cock sideways on left foot.  
 Pennant Coralfish: Right arm swings back.  
 Round Batfish: Ribcage swims forward, steps.  
 Harlequin Tuskfish: Pulses drawing 6 vertical lines.  
 Blackback Butterflyfish: Dot on right lower leg with left foot.  
 Clown Triggerfish: Energy reverberates upward.  
 One-spot Butterflyfish: Right nipple-dot.  
 Bicolour Angelfish: Retreat.  
 Mimic Surgeonfish: Left hand slap.  
 Surgeonfish: Pelvis head figure 8.  
 Convict Tang: Imagine color on way down.  
 Quoy's Parrotfish: Right backwards nose foot.  
 Longnose Butterflyfish: Cross-cross karate forearms.  
 Threadfin Butterflyfish: Slow lower.  
 Moon Jelly: Soft floating down and in, expanding out from toes and fingers and head to diagonal leg accent. at the tip) float down, numerous smaller expansions in different body parts.  
 Western Grey Kangaroo: Projectile hop forward to downstage right.  
 Emu: 3 emu runs, chest side to side. Slow dunk water sip, fast, fast recover.  
 Bennett's Wallaby: Slunk down through straight back, then 2 movements, 1st the head looks up, then the body come up to look.  
 TUNDRA (5 Species)  
 Polar Bear: Slow heavy sink to knees and elbows, focus turns away upstage right.  
 Snowy Owl: Come up onto hands, ripple contraction into release send the body forward onto right leg, then contract over, rising halfway through clavicle wings, then come up with windy feather foot, still focus.  
 Reindeer: Kick grab with right foot then left.  
 Snow Goose: Breastbone/scapula wing action ~ small.  
 Arctic Wolf: Japanese kabuki wolves (elbows and knees).  
 THE AMERICAS (73 Species)  
 Banded Pheasant: Rib cage stutter to enter small space.  
 Great Horned Owl: Neck flutter.  
 Common Piping Guan: Prep into nothing.  
 Scarlet Ibis: One backwards knee-walk left foot.  
 Blue-crowned Motmot: Foot tremor right left, steps  
 Sunbittern: Fold out leg wings, fold back in  
 Purple Gallinule: Head forward then down right, tremor  
 Spectacled Owl: Head in chest, half semicircle upwards, turn right, then half semicircle to left downwards ending.  
 Boa Constrictor: Right arm reaches out and up, then bends and lowers down left.  
 Jamaican Boa: Make parallels, left shin on ground.  
 Two-toed Sloth: Soften forward - elbows and right knee.  
 White-faced Saki: Reverse roll down to come halfway up.  
 Golden Tamarin: Reach out long and low, roll back up with spiral to the left, top of head up and out! Left shoulder.  
 Common Marmoset: Tail curls underneath, one step forward left.

Pygmy Marmoset: Feeding head, look then dive, sharp.  
 Plush-crested Jay: Little bounces.  
 Green Aracari: Left arm back, from chest, becomes the rotating head and beak.  
 Crested Tinamou: Head leading drags bum w/shunt, shifting to US left corner.  
 Prehensile-tailed Porcupine: Posture slump.  
 Green Surf Anemone: Just be the anemone.  
 Pacific Giant Octopus: Suck the water in, let it go to move you.  
 Strawberry Anemone: Pause.  
 Pacific Spiny Lumpsucker: Fingers fin-fans behind by hips.  
 Silver Perch: Back of right knee, quick look changes.  
 Sea Pen: Shape of the skeletal ribs, bringing it around.  
 Red-breasted Piranha: Shiver bum, same time.  
 White-blotched River Ray: Feet ~ either each a ray, or one ray together.  
 Golden Frog: Hand open.  
 European Loggerhead Shrike: Tail head up, tail head up.  
 Black-footed Ferret: Steps forward, caught mid back ripple steps.  
 Puerto Rican Crested Toad: Belly breathing.  
 Axolotl: Retreat the hand as though it were the neck fins.  
 Blue Poison Dart Frog: Right knee leg up and rotate.  
 Eyelash Viper: Rib cage and feet.  
 Surinam Toad: Babies popping out.  
 South American Giant Bird-eating Spider: Two legs to the side, no body.  
 Giant Centipede: Shimmy starting in torso and working up toward the head and out falling forward.  
 Desert Hairy Scorpion: Interrupt and 3 steps back (not in torso).  
 Ferocious Water Bug: Rotation on right leg.  
 Sunburst Diving Beetle: Shunt on back right leg.  
 West African Giant Land Snail: Snail-antenna in shoulders, back up left.  
 Giant Brazilian Cockroach: Scuttle around under your shell, demi-pointe.  
 Black Widow Chest: breathing expand.  
 Vinegaroon: Aim the vinegar spray, then spray.  
 Greenbottle Blue Tarantula: Leg pincers pinch together.  
 Eastern Spiny Soft-shelled Turtle: Floating ribs swim you upwards slow to fast.  
 American Alligator: Face comes out of water.  
 Spotted Turtle: Mating backwards hinge.  
 Florida Gar: 5 look/direction changes, 2 back, 3 around not sticking bum out.  
 Blind Cavefish: Flutter arm.  
 Matamata Turtle Head: look blink.  
 Cuvier's Smooth-fronted Caiman: Prepare.  
 River Otter Head: curling flip and turn  
 Electric Eel: Sideways body wave.  
 Gila Monster: Chest collapse.  
 Chuckwalla: Belly collapse, arms space hold.  
 Whiptail Lizard: Head isolations.  
 Snapping Turtle: Snap/lunge right with body, step, step.

Beaver: Sawing logs repetition.  
 Pacific Rattlesnake: Rattle right foot.  
 Pumpkinseed Sunfish: Swerve left.  
 Bluegill Sunfish: Reverse back.  
 Smallmouth Bass: Spiral step, step.  
 Rock Bass: Collarbone gills up & away from each other.  
 Painted Turtle: Neck forward retreat, retreat.  
 American Eel: Baby chest eels.  
 Massasauga Rattlesnake: Pick up right foot, rattle right ear.  
 Barn Owl: Arm wings, swerve left.  
 Macaw: Bullet dive forward.  
 Flamingo: Turn into high right tucked leg, then dive head toward ground.  
 Capybara: Rest on elbows, tickle to collapse, return to elbows.  
 Black-handed Spider Monkey: Come up with bum to the left, then around to right, then hang out.  
 Jaguar: 3 stalking steps toward Canada.  
 CANADIAN DOMAIN (25 Species)  
 Lynx: Two turning backwards snow walks, lookup, lynx leg prep.  
 Mountain Lion: Head cock, down the tree and off.  
 Grizzly Bear: Baby bear look over right shoulder on knee, then fall down for stomach scratch.  
 Wapiti: Rolling to sit facing back, with antlers. Then toss antlers back to place left foot flat down, on right knee.  
 Green-winged Teal Duck: Duck down shimmy.  
 Gadwall Duck: Duck pitch.  
 Canada Goose: Pull back and to right.  
 Mallard Duck: Bum shake.  
 American Wood Duck: Shifting over to left hand, right top of foot anchoring.  
 Sora Rail: Tremor song.  
 Great Blue Heron: Heron leg, head down.  
 Northern Pintail Duck: Arm behind bum scratch.  
 Bufflehead Duck: Scruff of neck.  
 Blue-winged Teal Duck: Rabid mosquito on back of neck.  
 Mute Swan: Shuffle and half turn spread of back wings.  
 American Pigeon: Flock of pigeons inside the body, flocking.  
 Carolina Wood Duck: Trace neck feather swoop.  
 American Goldeneye Duck: Stuttering in place, nowhere to go!  
 American Black Duck: Two turned in hippy duck walks right left.  
 Moose: Majestic stand with turned head. Baby mouse fall to downstage right.  
 Trumpeter Swan: Chest wing flap up, head dive down.  
 Raccoon: And up/over, up/over, up.  
 Bison: Lower heel straight leg, 1 bison slap.  
 Bald Eagle: Elbows as two eagles, joining and separating to turn.  
 AFRICAN SAVANNAH (21 Species)  
 African Penguin: Penguin walk upstage left, hiccup to corner, head bob forward/back.  
 African Cattle: Tracing each spiral horn with chin, feet stay together.  
 Spotted Hyena: One scuttle forward, two with the bum trying to get away.



African Porcupine: Fan inside out and wave.  
 White Lion: Head rolling in sand, fast turn into slow-mo pounce.  
 Olive Baboon: Shift hop to the side, bob back, look up left, then right.  
 Cheetah: Fast run in circle into slow-mo step forward on right leg, peeling left foot off.  
 White Rhino: Right arm drops as tail, then back foot traces rhino horns (both).  
 Grevy's Zebra: 10 vertebral arches staying low.  
 Lesser Kudu: Trace the horns with top of head.  
 Blue Wildebeest: Preparation for jumping into the river, and jump.  
 Sable Antelope: Trace back horns/head/arch.  
 Warthog: Bum wash.  
 Marabou Stork: Knock-kneed run.  
 Ground Hornbill: Chin leads back right front left front right "straight" legs.  
 Hippo: Mouth fold and swallow.  
 White Pelican: 2 feet press off and right wing.  
 Ostrich: Prance, prance, prance. Collapse.  
 White-breasted Cormorant: Knee shuffle to right, staying low.  
 Masai Giraffe: Giraffe head whip to the left, then half a knee turn.  
 AFRICAN RAINFOREST (47 Species)  
 Nile Monitor: Push off back arm.  
 Royal Python: 3 shutters back and forth to up on knees and swallow forward with torso.  
 Ring-tailed Lemur: Knee crossed legs.  
 Crowned Crane: Dive forward on right leg and shake tailfeathers, then dive head forward and come up on demi-point.  
 Nile Soft-shell Turtle: (While on demi pointe) head looks and left arm becomes fin and pushes away to step across left foot.  
 Red River Hog: Head flap to shake ears, then shake right foot out, stepping forward and letting arm go.  
 Radiated Tortoise: Starts going up the back into a quarter turn step.  
 Ornate Nile Monitor: Peel the back-right foot off (sideways).  
 Pygmy Hippo: 3 loping sideways steps starting with a drop.  
 Home's Hinge-back Tortoise: Stars on back but more punctuated.  
 Fruit Bat: spin and step out to second (downstage right).  
 Sacred Ibis: Quavering throat in inner thighs, 2 steps forward.  
 Egyptian Goose: Add arm flap to extra 2 steps.  
 Finch: Chest singing pumps homolateral to backward walks, shrinking.  
 Crane: Head dips, tail pokes.  
 Mousebird: Up to demi pointe, head twitch looks to the right.  
 Bulbul: Tip torso right, left, quarter turn, then turn torso upright while stepping across with left foot.  
 Chocolate-striped Squeaker: Tail (back leg) pushes, then head and body turn.  
 African Bonytongue: 3 side to side swims.  
 Malagasy Killifish: Fast pelvis quiver at the top.  
 Aba Aba: 3 right arm quivers while stepping out.  
 Veiled Chameleon: Right arm retreats then reaches as tongue out to side-turn.  
 Meller's Chameleon: Curl right arm as tail.

Slender-tailed Meerkat: Standing meerkat facing front.  
 Cichlid 1: Left shoulder back.  
 Cichlid 2: Right palm up.  
 Cichlid 3: Left hip up and head.  
 Cichlid 4: Head half circle back.  
 Cichlid 5: 2 knee shuffles forward.  
 Cichlid 6: Chest press up.  
 Cichlid 7: Rigid hulas to left twice.  
 Cichlid 8: Quiver with right leg off ground.  
 Cichlid 9: Double knee stripe/swipe.  
 Cichlid 10: One knee at a time (knee chase).  
 Cichlid 11: Sideways moonwalk.  
 Cichlid 12: Twist to left on demi pointe.  
 Cichlid 13: Ribs to step across with right foot.  
 Cichlid 14: Hands and feet to eat.  
 Cichlid 15: Downward dive on demi pointe.  
 Cichlid 16: Turn leading w/head.  
 Cichlid 17: 2 steps forward.  
 Cichlid 18: Hand to armpit.  
 West African Dwarf Crocodile: Jump up right.  
 Tomato Frog: 2 little jump shunts as tongue catches.  
 Mantella Frog: 1 shunt back from the center.  
 African Clawed Frog: Roll up through feet and hands.  
 Violaceous Plantain Eater: Dropped wrist weight back “tap dance.”  
 Hammerkop: Three backwards steps w/small head bob.  
 Triangular-spotted Pigeon: Plump fluffed bird drop.  
 Blue-bellied Roller: Hops around low.  
 Spotted-necked Otter: First half of standing otter but on the knee.  
 Radiated Tortoise: First version starts on back.  
 Lowland Gorilla: Chest beating but in back, lowering to a crouch.  
 Naked Mole Rat: Skin flip roll.  
 Straw-coloured Fruit Bat: Upright strikes.  
 Egyptian Fruit Bat: Previous but parallel to ground ending in a plank.  
 INDOMALAYA (48 Species)  
 Sumatran Tiger: Slinky tiger plank.  
 Himalayan Monal: Little bum hops to bring feet under, then swivel to downstage right.  
 Black-throated Laughingthrush: Fast hop turn to upstage left.  
 Malaysian Painted Turtle: Contralateral turtle swims, 3 arms.  
 Tomistoma: Many-toothed left leg coming through and stepping.  
 Tentacled Snake: Head dart directly downstage right.  
 Malayan Bonytongue: Repeat 3 side to side body swims facing back.  
 Fairy Bluebird: 3 hops around the half circle, travelling.  
 Crested Wood Partridge: 3 sideways travelling steps, three small sideways turns of the body.  
 Palawan Peacock Pheasant: 3 torso-head looks, ending up right.  
 Siamese Catfish: Glide-walk the semicircle of the fairy bluebird.

Mandarin Duck: 5 duck walks upstage left.  
 Jumbo Gourami: Hip swims standing in place.  
 Red-tailed Black Shark: Bigger hip takes you onto one leg (left).  
 Goldfin Tinfoil Barb: Turn, turn, turn.  
 Tri-colour Shark: Another bigger hip takes you onto one leg.  
 Mekong Barb: Piqué upstage left on right foot.  
 Clown Loach: Accelerate four fast steps to corner and stop.  
 Wrinkled Hornbill: Backwards swallowing steps.  
 White-crested Laughing Thrush: Diagonal throat forward, replace with bum.  
 Spiny Turtle: Spiny shell circle with right shoulder.  
 Burmese Star Tortoise: Counter clockwise head circles building.  
 Brown Turtle: 2 turtle walks forward left 1/2 right.  
 Vietnamese Box Turtle: Turtle heads on one foot.  
 Gaur: Foot down left arm right arm, hum drop, tail swish, swish.  
 Red-lined Torpedo Barb: Piqué forward left foot, body stays down, arm still as tail.  
 Fireback Pheasant: Arms fast flutter having fallen back, only shoulder height.  
 Pheasant Pigeon: Front left leg as back tailfeathers, 2.  
 Black-breasted Thrush: Kneecap as bird turning and taking off.  
 Temminck's Tragopan: Double chin pull back, back leg, hips as waddle toss.  
 Nicobar Pigeon: Delicate plumage turnaround.  
 Crested Wood Partridge: Jumping head thrust landed balance.  
 Reticulated Python: Forward moonwalk.  
 Sumatran Orangutan: On 3rd moonwalk, reach orangutan arms up, then left leg, then drop body and hang in contraction.  
 Chinese Soft-Shell Turtle: Right arm push as turtle fin focus front.  
 White-handed Gibbon: Monkey swing and tightrope walk to upstage left.  
 Boelen's Python: Snake head to downstage right corner and left hand as snake tongue.  
 Crocodile Newt: Fast contorted contraction.  
 Red-tailed Green Rat Snake: Head snake around and left hand as tongue.  
 Crocodile Lizard: Eating with belly.  
 Gourami: Hula hoop hips.  
 Chinese Gliding Frog: Strike a gliding pose.  
 Malayan Leaf Frog: Belly/chest breathing while in mid-glide.  
 Black-breasted Leaf Turtle: Fast retreat to crouch.  
 Asian Shrimp: Dandelion hands to standing, turning.  
 Concave-casqued Hornbill: Head/beak butt forward "let me out".  
 Sumatran Tiger: 2 Salsa-tiger arms forward standing.  
 Pekin Robin: Right leg back describing diagonal tailfeathers X3.  
 MALAYAN WOODS (47 Species)  
 Asian Water Dragon: 4 arm dragon shifts and up, starting right.  
 Zebra Dove: 1 right leg, 4 peck drops forward and up, flutter drop slide left.  
 Luzon Bleeding-heart Dove: 3 nose pecks and walk in little circle.  
 Green-winged Dove: 4 left forearm as pecks (clock), then hinge drop to drink.  
 Gourami: Hips figure 8 as recovering to back corner.  
 32 Butterflies: 32 fast butterfly-impacts while turning in a circle.

Fireback Pheasant: Repeat fast arm flutter, only shoulder height.  
 Red-billed Magpie: Head ride and curl to crouch, then head thrusts forward into long line, left leg as tail feathers.  
 Malaysian Wood Nymph: Repeat hands as tentacles as you step through.  
 Indian Ornamental Spider: Fast scuttle around backwards to face front.  
 Malaysian Black Scorpion: Right leg strikes and curls back as a scorpion's tail.  
 Clouded Leopard: 2 padding steps, right left, the right leg acts as long tail.  
 Red-tailed Green Ratsnake: Repeat head snake around and left hand as tongue.  
 Indian Rhino: Loping hops right left in half circle upstage (maybe more).  
 Green Macaque: Shift weight forward paws up, two looks downstage, sequentially retreat.  
 Babirusa: Startled!!  
 Peacock: Majestic peacock feathers, down and up from the back...high lift...flutter...  
 END leave and walk, arms straight down from sides, not softening at the elbows.

## **APPENDIX B**

### ***ARCHE***

#### ***ARCHE VIDEO:***

ARCHE - March 2018: <https://vimeo.com/305080056>

#### ***ARCHE SCORE:***

Animals are numbered as they are considered extractable moe elements, or data. Included in each entry is: the species or breed, the video used to create each kinetic moe element, and Danielle's personal notes regarding execution and form.

#### **MONKEYTOWN (36 Species)**

1. Asian elephant: <http://www.bbc.com/news/world-asia-35320521>  
Elephant shift walks, right arm as snout, left arm as tail, around path, 2 elephant ear flaps (left knee shift weight) wind
2. James flamingo: <https://www.youtube.com/watch?v=MBdLsfir7xs>  
Flamingo neck in right leg looking for fish, ending with two circle reaches out
3. Chilean flamingo: <https://www.youtube.com/watch?v=vpv4V4nHtQY>  
Spine as neck reaching to fight, stepping right, left
4. Cape porcupine: <https://www.youtube.com/watch?v=tZ20iw0aOU4>  
Quills erupt from back, teeter-totter walk (back waltz)
5. African brush tailed porcupine: <https://www.youtube.com/watch?v=21s4pIC2lco>  
Two quick half-turn squirms leading top of head, right then left
6. Nutria: <https://www.youtube.com/watch?v=hreCRsIiz9U>  
Furry washing machine in belly
7. Hamadryas baboon: [https://www.youtube.com/watch?v=4LTWi13\\_jjk](https://www.youtube.com/watch?v=4LTWi13_jjk)  
Look look. One right paw/arm with several steps, then sit back, dropping arm
8. Lion tailed macaque: <https://www.youtube.com/watch?v=zSz6ii29Afo>

- sit up and forward arms away from body, and two looks increasingly towards the left, then sit back down, sequentially
9. Western lowland gorilla: <https://www.youtube.com/watch?v=ou0E2H8Wvx4>  
same as *ARK*, chest beating but in back to a crouch
  10. Orangutan: <https://www.youtube.com/watch?v=HshUwr05Ebw>  
on 3rd moonwalk, reach orangutan arms up, then left leg, then drop body and hang in contraction
  11. Chimpanzee: <https://www.youtube.com/watch?v=rTgU-cBr7xg>  
reach star for tree (legs stay bent) and shimmy down, facing downstage
  12. Siamang: <https://www.youtube.com/watch?v=k3cD1Nd302k>  
dip swing, then put throat howling in hands, alternating
  13. Pileated gibbon: <https://www.youtube.com/watch?v=IqgZaWUcgRY>  
lead with head, rotate ALL to front, elbows loose, returning with knees still bent, let the arms go completely to settle
  14. Mandrill: <https://www.youtube.com/watch?v=qlAzwsTRzKU>  
draw face with body ~ head as hair, torso/arms as snout, thighs as beard ... ricochet
  15. Stump tailed macaque: <https://www.youtube.com/watch?v=B-4dNnFv0EE>  
left arm paw then right leg paw grabs for loose branch
  16. Toque macaque: <https://www.youtube.com/watch?v=Q-nDBo3gAvk>  
remembering hands on screen of macaque time
  17. Hamlyn's monkey: <https://www.youtube.com/watch?v=P4jSs3zSKEk>  
right arm as tail, moves up and back (because of back), body rotate to downstage left, then it lowers
  18. Grey langur: <https://www.youtube.com/watch?v=rFmLOv2sQzU>  
arm as tail, loooooong to the ground (bent knees)
  19. Javan lutung: <https://www.youtube.com/watch?v=BmeeKuk6zfE>  
relax tail and come forward on knees, focus right, front, then down right
  20. Black capuchin: <https://www.youtube.com/watch?v=ADSSx7N2a6U>  
slink-slide to left, focus back right
  21. Black howler: <https://www.youtube.com/watch?v=BpDd573X4k4>  
left arm as tail swipe, leading into
  22. Black headed spider monkey: <https://www.youtube.com/watch?v=ikQmNxxB-sQ>  
hip lead around to face down left
  23. Coppery titi: <https://www.youtube.com/watch?v=eBLk9K2lm2Y>  
still flat-backed over, move sequentially along branch to the right, hand hand, foot behind...etc.
  24. Red acouchi: <https://www.youtube.com/watch?v=HHi17N81oBM>  
tiny fall forward shunt
  25. Squirrel monkey: <https://www.youtube.com/watch?v=mAlpLpbgvQo>  
lean forward "on" hands, then feeling of the flying coming up a bit
  26. Cotton top tamarin: <https://www.youtube.com/watch?v=1L0WDMNHILY>  
feeling the tail in the tailbone, out, then under
  27. Black mantled tamarin: <https://www.youtube.com/watch?v=f7wU8P0ukHc>  
face in left thigh – out, in, eating pulse in left heel
  28. Common marmoset: <https://www.youtube.com/watch?v=r89ZWByApLE>  
Tail curls underneath, one step forward left
  29. Black tufted marmoset: <https://www.youtube.com/watch?v=NQhYZuR-dzA>

- look up back left, wide step to follow it, changing head on step back to right
30. White headed marmoset: <https://www.youtube.com/watch?v=FbIMVKgpQXE>  
head in pelvis, fast little looks
31. Goeldi's marmoset: [https://www.youtube.com/watch?v=IH1HPP\\_icEA](https://www.youtube.com/watch?v=IH1HPP_icEA)  
head in calves, both together, just three small ones
32. White headed lemur: <https://www.youtube.com/watch?v=P2YmKzUkRSE>  
big golden eyes in the front shoulder creases, look right then left, head space hold
33. Prevost's squirrel: <https://www.youtube.com/watch?v=NadnkL5Hxas>  
three left leg shake-stops
34. Two toed sloth: <https://www.youtube.com/watch?v=-djO6LMz4Y>  
Soften forward onto elbows and right knee (indicate while standing)
35. Armadillo: <https://www.youtube.com/watch?v=110iUX1Ursk>  
feel shell bumps around midsection
36. Southern three banded armadillo: <https://www.youtube.com/watch?v=wSGQrRuyP8U>  
curl into ball
- BIRD LAKE (18 Species)
37. Abdim's stork: <https://www.youtube.com/watch?v=6akYvR2rWq0>  
head up with jump, falling back/side upstage with a peck (bum up) and hands as feathers
38. Whites stork: [https://www.youtube.com/watch?v=gAdKJ\\_Pntls](https://www.youtube.com/watch?v=gAdKJ_Pntls)  
arms snap back as stork's beak neck (feet together) then vibrate (up on demi pointe)
39. Cattle egret: <https://www.youtube.com/watch?v=hGmQ292qppo>  
two soft forward steps, then two forward ribcage ripple
40. Boat billed heron: <https://www.youtube.com/watch?v=sOGwTrokoXc>  
arms drop eye balls in side of ribs to turn and look upstage right
41. Hadada ibis: <https://www.youtube.com/watch?v=lZWYoKK4q1w>  
shiny feathers in arms
42. Fulvous whistling duck: <https://www.youtube.com/watch?v=qppBdHk7AQg>  
head dips for water and up shakes, while stepping forward right left
43. White faced whistling duck: <https://www.youtube.com/watch?v=vy0Iv0UDIuQ>  
tiny right foot tremor forward
44. West Indian whistling duck: <https://www.youtube.com/watch?v=fViw50NdoA4>  
big flex-footed around step with left
45. Hawaiian goose: [https://www.youtube.com/watch?v=1\\_xKI5r4qSo](https://www.youtube.com/watch?v=1_xKI5r4qSo)  
striated neck to the left foot landing to back corner
46. Australian pelican: <https://www.youtube.com/watch?v=lIRkI1utRrU>  
right leg developes as wing flying and falling forward
47. Dalmatian pelican: <https://www.youtube.com/watch?v=KoNIH5iDvZ0>  
hands/forearms hollow as they twist as wing feather on the way down
48. Great white pelican: [https://www.youtube.com/watch?v=qPnR\\_ZFPKwg](https://www.youtube.com/watch?v=qPnR_ZFPKwg)  
cowboy pelican walks
49. Blackbuck: <https://www.youtube.com/watch?v=Vz6xWJzqZmE>  
one black-bucking walk right leg
50. Pink backed pelican: <https://www.youtube.com/watch?v=36SvBs2pjt0>  
left knee stays under water leaps forward around water
51. Red Crowned crane: <https://www.youtube.com/watch?v=f-vGpEotSVY>

slow motion crane jump, no arms

52. Great cormorant: <https://www.youtube.com/watch?v=Y3OMuKZKdwM>  
drying my wet wings

53. Bewick's Swan: <https://www.youtube.com/watch?v=Y3OMuKZKdwM>  
duck and fold, right knee up

54. Black Swan: <https://www.youtube.com/watch?v=mE590aeTdqE>  
up on demi arms drop, then small head/beak dip, feet down

ANTELOPE-ISH FAMILY (8 Species)

55. Reticulated giraffe: <https://www.youtube.com/watch?v=4LRkGVhmXx8>  
slow step across right foot (reverberation)

56. Rothschild's giraffe: <https://www.youtube.com/watch?v=pg9bUkS87-Y>  
right arm out parallel as neck swing left then right, small

57. Defassa waterbuck: <https://www.youtube.com/watch?v=DJ0KHiXDEAU>  
waterbuck in right hand, horns growing out of wrists, battle

58. Leche waterbuck: [https://www.youtube.com/watch?v=nlgaL\\_VAI3c](https://www.youtube.com/watch?v=nlgaL_VAI3c)  
sinking in the grass

59. Bonobo: <https://www.youtube.com/watch?v=o2OOB-dH1s4>  
backin' it up

60. Sitatunga: [https://www.youtube.com/watch?v=bIlrYY0\\_SAg](https://www.youtube.com/watch?v=bIlrYY0_SAg)  
ears in shoulder blades together

61. Northern ground hornbill: <https://www.youtube.com/watch?v=h-OtwqgRgSQ>  
Chin leads back right front left front right "straight" legs

62. Gerenuk: <https://www.youtube.com/watch?v=esyE6HFTq4s>  
delicate come-down from the tree

CHICKEN LITTLE (14 Species/Breeds)

63. Red junglefowl: [https://www.youtube.com/watch?v=dgji\\_Ncm6SM](https://www.youtube.com/watch?v=dgji_Ncm6SM)  
red plumage in left rib rushing forward

64. Rock dove: [https://www.youtube.com/watch?v=GJWLD5a1\\_nk](https://www.youtube.com/watch?v=GJWLD5a1_nk)  
neck duck into collarbones

65. Berlin muffed tumbler: <https://www.youtube.com/watch?v=lqfQNOFPW54>  
tufted feet gesture with hands...etc small

66. Berliner Weisschwanz: <https://www.youtube.com/watch?v=0r7ycbGXmDs>  
left hand swipe as feather marking

67. Süddeutsche Blasse: <https://www.youtube.com/watch?v=LPPJoYLeFrQ>  
bedhead one step back on left

68. Berliner Lange: [https://www.youtube.com/watch?v=aFqojse\\_qGY](https://www.youtube.com/watch?v=aFqojse_qGY)  
smile swing with right knee, turning to downstage right

69. Blaubunt: ?

Air bubble under forearms

70. Rote Lockentaube: [https://www.youtube.com/watch?v=2i\\_Lt5P5o-4](https://www.youtube.com/watch?v=2i_Lt5P5o-4)  
bedhead arms, still hands (aka perm body)

71. Seidenhuhn: <https://www.youtube.com/watch?v=48qenhyDMEo>  
puffball circle (pelvis forward)

72. Federfüßiges Zwerghuhn: [https://www.youtube.com/watch?v=-jmuzru6X\\_8](https://www.youtube.com/watch?v=-jmuzru6X_8)  
chicken scratch right left small

73. Sebright Huhn: <https://www.youtube.com/watch?v=9LUa6Gqr0RU>  
Trisha elbow wings w/rebound
74. Goldfarb Genes Brakel Huhn: <https://www.youtube.com/watch?v=b8wy9yNUJbE>  
golden side plumage with arms, stepping on right, Trisha
75. Chabot Huhn: <https://www.youtube.com/watch?v=kKyTVpjxxSo>  
top of head as tailfeather up and back
76. Englischer Zwergkämpfer: <https://www.youtube.com/watch?v=h5C84nExT0w>  
leg up pause, three steps a round corner  
ALPINE RHINOS (35 Species/Breeds)
77. Kri kri: <https://www.youtube.com/watch?v=sTFI7piILig>  
sweet little kri kri figure eight with head to pique right leg
78. Himalayan tahr: <https://www.youtube.com/watch?v=2ArMWn0zDqU>  
beginnings of large tahr
79. Steinbock: <https://www.youtube.com/watch?v=RDrFbjO6rXg>  
antlers carving over to the right, preparing with a little head left
80. Alpine marmot: <https://www.youtube.com/watch?v=3-1rIMS-J3E>  
coming up to demi, grabbing the carrots
81. Woodchuck: <https://www.youtube.com/watch?v=ocMt8nCIM9U>  
Paw lunch mudra
82. Baird's tapir: <https://www.youtube.com/watch?v=u736IWzjC3k>  
no-bone snout in head shake
83. Brown tapir: <https://www.youtube.com/watch?v=wRc56nhogqs>  
little baby head tuck
84. Indian rhino: Toronto  
two loping runs right left
85. Black rhino: [https://www.youtube.com/watch?v=ilF0nU\\_d0CY](https://www.youtube.com/watch?v=ilF0nU_d0CY)  
one spirited run to s stop
86. Warthog: Toronto  
Bum wash
87. Hippo: Toronto  
Mouth fold and swallow
88. Southern pochard: [https://www.youtube.com/watch?v=g67\\_LM0zygM](https://www.youtube.com/watch?v=g67_LM0zygM)  
Cate Blanchette pupil
89. Tiefland nyala: <https://www.youtube.com/watch?v=DOuVTdEgegE>  
two sideways ribs into one step around corner
90. Pygmy hippo: Toronto  
three loping sideways steps starting with a drop
91. Vicuna: <https://www.youtube.com/watch?v=rF3kByyaf4M>  
lower leg traces head neck and eating peck
92. Llama: <https://www.youtube.com/watch?v=81HOHEfuKic>  
head upper body roll as neck
93. Guanaco: <https://www.youtube.com/watch?v=EIwrw4xyT1E>  
head/ear retreat roll
94. Dromedary: <https://www.youtube.com/watch?v=GGyok9kKlrs>  
head lies on side, then rises sequentially



95. Bactrian camel: Toronto zoo  
Hump gets heavy, fall in half circle, nostril (body) closes, waist as dessert landscape w/5 camels depending on the day
96. Domestic cat: [https://www.youtube.com/watch?v=o8\\_2N\\_VNuz0](https://www.youtube.com/watch?v=o8_2N_VNuz0)  
cat swipe, out of control
97. Hinderwalder winder:  
fat heavy cow
98. Cameroon sheep: <https://www.youtube.com/watch?v=FLQwMyQwyIE>  
draw one horn with right elbow
99. Four horned sheep: <https://www.youtube.com/watch?v=rhpNiZmcs18>  
four horns elbows and knees coming around corner
100. Jacobs sheep: <https://www.youtube.com/watch?v=HVHACk7-5Q8>  
elbow horns go back, knee horns go forward
101. African goats: <https://www.youtube.com/watch?v=hPaaTQqIMp4>  
elbow horns draw semi-circle under and forward
102. White German goat: <https://www.youtube.com/watch?v=lZMPXPdHuIQ>  
slump over soft ears
103. Shetland pony: <https://www.youtube.com/watch?v=hzfOv6y9c4M>  
arms as mane, right left
104. Poitou donkey: <https://www.youtube.com/watch?v=S0KD4fqyESE>  
figure out arms as ear to come up
105. Donkey: <https://www.youtube.com/watch?v=gROO7xSTxfY>  
ear flop, one forward one back, and braying action
106. Red bull pig: <https://www.youtube.com/watch?v=tOdnRRHqeDk>  
delighted snout smell to the corner
107. Guinea pig: <https://www.youtube.com/watch?v=6HPOwYg4je>  
Sniffing
108. Blue Weiner rabbit: <https://www.youtube.com/watch?v=FACwemTAYMc>  
bunny vibrates
109. Widder rabbit: <https://www.youtube.com/watch?v=eC8aK0Tcyoc>  
pick up bunny wrists
110. Goose: <https://www.youtube.com/watch?v=REWu0qkVOCI>  
goose walk three steps
111. Indian runner duck: <https://www.youtube.com/watch?v=AxbhYXIAdeg>  
turning falling duck runs  
SHOREBIRDS (31 Species)
112. Garganey: <https://www.youtube.com/watch?v=MEWnLXj8pEA>  
back lower ribcage and right heel as neck
113. Smew: <https://www.youtube.com/watch?v=ibjYIFAR6YM>  
wobble-wobble
114. Pied Avocet: <https://www.youtube.com/watch?v=uuhVCKFYGdA>  
right arm as beak swipe drill in it (left right in)
115. Black winged stilt: <https://www.youtube.com/watch?v=QaPX-GRnDho>  
dive in to the right hip parallel "attitude" step-step
116. Spotted thick knee: <https://www.youtube.com/watch?v=0pk0JCxnGG0>

windshield wiper right arm elbow at 90 then straight back

117. Greater scaup: <https://www.youtube.com/watch?v=aeYddKDg0i4>  
heavy duck body in right hand

118. Masked lapwing: <https://www.youtube.com/watch?v=JrRq4BSydxY>  
hover turn and little shunts to corner

119. Crowned lapwing: <https://www.youtube.com/watch?v=Lofpduvun5Q>  
stroke yellow nose ribbons

120. Eurasian curlew: <https://www.youtube.com/watch?v=1Jch6qpD4J8>  
doggy back right leg wing tremor

121. Long-toed lapwing: <https://www.youtube.com/watch?v=YYkN-pwV0Dg>  
sideways shuffle small arm wings

122. Northern Lapwing: <https://www.youtube.com/watch?v=JM6RrwhHC2A>  
little hop attempt while tracing shape of head feather

123. Ruddy Turnstone: <https://www.youtube.com/watch?v=Ovv30db4mYk>  
right foot as beak digging at crab claw action

124. Common Redshank: <https://www.youtube.com/watch?v=S2I8-0Xllgo>  
tracing outline w/left leg and right arm

125. Rufous night heron: <https://www.youtube.com/watch?v=YdB6Bs2rEWo>  
cloak of feathers, trail dots

126. Common teal: <https://www.youtube.com/watch?v=4Zp5LeycxLI>  
rabid mosquito on back of neck

127. Common goldeneye: <https://www.youtube.com/watch?v=9Fwi9Di-RjU>  
mega high lift arch

128. Bufflehead: <https://www.youtube.com/watch?v=kBf5VPv28BY>  
Scruff of neck half-turn swivel

129. Inca tern: [https://www.youtube.com/watch?v=OUMp\\_Xkumb8](https://www.youtube.com/watch?v=OUMp_Xkumb8)  
make the mustache with your face, small

130. Arctic tern: <https://www.youtube.com/watch?v=lQe4QuitRYE>  
snap into left bird leg

131. Spectacled duck: <https://www.youtube.com/watch?v=vV9jhGIMJgY>  
coming up to see and duck forward with neck

132. James flamingo: <https://www.youtube.com/watch?v=MBdLsfir7xs>  
Flamingo neck in right leg looking for fish, ending with two circle reaches out, turning to corner

133. Andean flamingo: <http://www.arkive.org/andean-flamingo/phoenicoparrus-andinus/video-09a.html>  
pique on right leg, flamingos with fingers, arms up

134. Waldrapp: <https://www.youtube.com/watch?v=bI3-NpySnkA>  
hands become high back feather, chest keeps moving forward as the beak

135. Cassowary: <https://www.youtube.com/watch?v=6Vqs2ZOOirk>  
look up to branches and cassowary jump. Loose legs and feet landing wide, then wild jump to fall running stage right

136. Sarus crane: <https://www.youtube.com/watch?v=0XFvIzqtBOY>  
arrested in tallest flying bird, fourth position

137. Alpaca: <https://www.youtube.com/watch?v=Zile3eVdlTQ>  
Banking to the right leading with head (tight turn)

138. Eurasian eagle owl: Toronto  
Opposite corner, turn head, turn body
139. Harris hawk: <https://www.youtube.com/watch?v=8LG8JyW5U4>  
hawk swerve in left elbow
140. King vulture: [https://www.youtube.com/watch?v=Qdcuh\\_AXB7o](https://www.youtube.com/watch?v=Qdcuh_AXB7o)  
uneven nose waddle head drop to left
141. Arctic wolf: Toronto  
one wolf head as whole body, too Japanese kabuki wolves (elbows and knees)
142. Polar bear: Toronto  
Slow heavy sink to knees and elbows, focus turns away upstage right  
PHEASANT HOUSE (68 Species)
143. Barefaced curassow: <https://www.youtube.com/watch?v=l5a-CMShCck>  
right left hair filaments
144. Golden breasted starling: <https://www.youtube.com/watch?v=LoVz0YhNNDI>  
trace right outline from back of neck to scapula (feather tint)
145. Little bittern: [https://www.youtube.com/watch?v=G8\\_c7K820ao](https://www.youtube.com/watch?v=G8_c7K820ao)  
cocked head back before head reaches over to left
146. Ringed teal: <https://www.youtube.com/watch?v=s3CclknxvyI>  
release the belly spots (and neck), finish.
147. Common tern: <https://www.youtube.com/watch?v=ruRUsa3Ls34>  
four towers wing
148. Australian magpie: <https://www.youtube.com/watch?v=oYEEYc8Ge3nw>  
rotate shoulder girdle to show white back feathers
149. Eurasian scops owl: <https://www.youtube.com/watch?v=Q3Oe-fmHwg4>  
diagonal shoot-out onto left palm
150. Red rumped cacique: <https://www.youtube.com/watch?v=Baf2Tmb3UBs>  
flash red inner leg feathers (lift right knee)
151. Common cardinal: [https://www.allaboutbirds.org/guide/Northern\\_Cardinal/videos](https://www.allaboutbirds.org/guide/Northern_Cardinal/videos)  
cardinal flash roll
152. Superb starling: <https://www.youtube.com/watch?v=vwutJ0orINI>  
plump soft belly feathers into
153. Blue bellied roller: <https://www.youtube.com/watch?v=VluoTQsZMRw>  
hops around low
154. Greater argus: <https://www.youtube.com/watch?v=hIvhgbWaGIM>  
pheasant hurrah! (wrists close) Land on hands and knee
155. Blue throated piping guan: Toronto  
Prep into nothing
156. Elliot's pheasant: <https://www.youtube.com/watch?v=wEOqyBGeRZw>  
tailfeathers back with left fingertips
157. Great curassow: <https://www.youtube.com/watch?v=IzJOUM81aMI>  
hand/arm rotation, describing crown
158. Black fronted piping guan: <https://www.youtube.com/watch?v=SANZQLcSVIM>  
Prep into nothing
159. Great argus pheasant: <https://www.youtube.com/watch?v=3IrlBKv1sE0>
160. Bronze tailed Peacock Pheasant: [https://www.youtube.com/watch?v=1DS0k\\_HveZI](https://www.youtube.com/watch?v=1DS0k_HveZI)

feather dust bath (settle in for three)

161. Lady Amherst's pheasant: <https://www.youtube.com/watch?v=eAqWSJvQmx0>  
flare-up lady Amherst

162. Wattled starling: <https://www.youtube.com/watch?v=r07LMsENCZE>  
head cock over to the right

163. Grey peacock pheasant: [https://www.youtube.com/watch?v=ZHn5fku\\_QMo](https://www.youtube.com/watch?v=ZHn5fku_QMo)  
roll and catch the dots

164. Myna: <https://www.youtube.com/watch?v=c1QLqtY25cA>  
bird flap to fall forward

165. White bellied go away bird: [https://www.youtube.com/watch?v=pHI\\_lxDTRVk](https://www.youtube.com/watch?v=pHI_lxDTRVk)  
bring crown through! Focus front

166. Madagascar crested ibis: <https://www.youtube.com/watch?v=yA9lweSoCgg>  
slick gangster-do, looking forward

167. Asian pied starling: [https://www.youtube.com/watch?v=8Hd-4Kz\\_OU](https://www.youtube.com/watch?v=8Hd-4Kz_OU)  
become a nest, then right knee as bird opens forward

168. Blue eared starling: <https://www.youtube.com/watch?v=jeSLBk042L4>  
show the iridescent feathers of the right arm and "hand"

169. White bellied buffalo weaver: <https://www.youtube.com/watch?v=QgDDyXVSMDM>  
no-neck ruffled high lift

170. Purple roller: <https://www.youtube.com/watch?v=7ccmvKnGfcE>  
unfurl back left leg feathers

171. Palawan peacock pheasant: Toronto  
three torso-head looks, ending up right

172. Siamese fireback pheasant: Toronto  
arms fast flutter having fallen back, only shoulder heightgh

173. Malaysian fireback: <https://www.youtube.com/watch?v=Jqc88xo8zN4>  
knees together white tail with hands facing upstage

174. Grey junglefowl: <https://www.youtube.com/watch?v=mKmoOup5rHM>  
four beak reaches and finger separations, up to high right

175. Sri Lankan junglefowl: [https://www.youtube.com/watch?v=v984L6\\_mQzE](https://www.youtube.com/watch?v=v984L6_mQzE)  
stutter-hop on knees

176. Red legged seriema: <https://www.youtube.com/watch?v=3epdd-r3-vk>  
dive up with right fingertips and slap swing down (lizar catching)

177. Cuckoo: <https://www.youtube.com/watch?v=zzzSEZIrG0c>  
little knee shuffle then head dive onto knees, toes up

178. Channel billed cuckoo: <https://www.youtube.com/watch?v=iSu-4Rb0TNE>  
striated alternating lowering to ground of right elbow and left foot

179. Superb fruit dove: <https://www.youtube.com/watch?v=r1VSNTkFqE0>  
come up to show belly, show right shoulder blade feathers, left, head on the way down

180. Lesser mouse deer: <https://www.youtube.com/watch?v=Fj-LwcjNsxo>  
spring up to lesser hooves, shoulder twitches and one to two pelvis twitches

181. Sulawesi ground dove: <https://www.youtube.com/watch?v=laex-lnCL6c>  
resting back of head on shoulder feathers

182. Trumpet manucode: [https://www.youtube.com/watch?v=tN\\_thWto3NA](https://www.youtube.com/watch?v=tN_thWto3NA)  
high vomit

183. Village weaver: <https://www.youtube.com/watch?v=2NOFDYFa0gM>  
head as the heavy swaying birds nest, then heavy nest to come onto hands, then pop up hands as the frantic birds just briefly
184. Senegal dove: <https://www.youtube.com/watch?v=xxBfuHod2Oc>  
blow up armpit sides, elbows out
185. Bare Faced go away bird: <https://www.youtube.com/watch?v=VIDvUG4QKCO>  
wing in right elbow, opening torso as well
186. Malagasy turtle dove: <https://www.youtube.com/watch?v=GCB4-JWZ1kQ>  
side puff-up
187. Ruppell's glossy starling: <https://www.youtube.com/watch?v=qttIpoOz3eo>  
left leg as glossy tailfeather wrap-around w/sway
188. Brown hooded kingfisher: <https://www.youtube.com/watch?v=KsaEBtVK0qA>  
right arm whip-circle on ground
189. White bellied bustard: [https://www.youtube.com/watch?v=7sLO\\_jzuhC8](https://www.youtube.com/watch?v=7sLO_jzuhC8)  
beak reach forward from right side rib cage
190. Yellow faced francolin: <https://www.youtube.com/watch?v=YgadH5bt7SM>  
small alternating movements to turn to back corner, starting with left foot under, interrupted by
191. Germain's peacock pheasant: <https://www.youtube.com/watch?v=IVr2GdCvAcA>  
feathers spreading across back
192. Luzon bleeding heart: <https://www.youtube.com/watch?v=m-ATxafN710>  
three nose pecks and curl into fourth
193. Red whiskered bulbul: <https://www.youtube.com/watch?v=UnaLmrb7DCE>  
tip/perch onto right hip, legs crossed
194. Darnaude barbet: <https://www.youtube.com/watch?v=fkYIZJcbJQU>  
left shoulder pulse, fall onto right elbow
195. Java sparrow: <https://www.youtube.com/watch?v=FNz1jjKT0yQ>  
body dart out to right
196. Hottentot teal: <https://www.youtube.com/watch?v=KC2enPkBpkM>  
quick up onto left leg
197. Amethyst starling: <https://www.youtube.com/watch?v=fFSwYSFTjqQ>  
miniature pulses bringing right side of ribs around
198. Black francolin: <https://www.youtube.com/watch?v=erh6OGUKvdg>  
three feather traces from right shoulder down to left hip
199. White cheeked turaco: [https://www.youtube.com/watch?v=uVi0WjosH\\_0](https://www.youtube.com/watch?v=uVi0WjosH_0)  
trace outline of head feathers with chin
200. Kagu: <https://www.youtube.com/watch?v=tSovmWOusgs>  
head back, then body shifts back (personal space invaded)
201. Ocellated turkey: <https://www.youtube.com/watch?v=380p6Qix7LM>  
stutter on hands, moving a bit up and forward and back
202. Great bustard: <https://www.youtube.com/watch?v=F7scfEj5Dt4>  
inside-out flip
203. Lesser flamingo: <https://www.youtube.com/watch?v=IRGlRk-08a4>  
reverse flamingo onto right hand left leg
204. Tawny frogmouth: Toronto  
3 head ticks to up right, shifting into little fourth

205. Violet turaco: <https://www.youtube.com/watch?v=wiEhwb17kB0>  
left knee across to eat the apple to step into
206. Greater roadrunner: [https://www.youtube.com/watch?v=RU\\_7nZbII6o](https://www.youtube.com/watch?v=RU_7nZbII6o)  
back feathers and dark skin patch fueling up, staying low
207. Channel billed cuckoo: [https://www.youtube.com/watch?v=DhOdBIW\\_qA8](https://www.youtube.com/watch?v=DhOdBIW_qA8)  
open mouth with knees, second forced arch (snap hold open while beak enters pelvis for food)
208. North Island brown kiwi: <https://www.youtube.com/watch?v=Ehiv5FWAsrQ>  
foot in left hand fast reach out and return
209. Pearl spotted owl: [https://www.youtube.com/watch?v=6OOOdSpr\\_uY](https://www.youtube.com/watch?v=6OOOdSpr_uY)  
owl head in torso back and forth
210. Rhea: <https://www.youtube.com/watch?v=owEgqsZFjcc>  
fluff arms and steps, arms reverse up and over (high), then head comes out crookedly, into the corner
- BIRDHAUS (78 Species)
211. Silvery cheeked hornbill: [https://www.youtube.com/watch?v=9D\\_83rgrrtU](https://www.youtube.com/watch?v=9D_83rgrrtU)  
Two-foot flat back shunt forward to up right
212. Golden weaver: <https://www.youtube.com/watch?v=TBMWRCWijlk>  
knee vibrations
213. Emerald starling: <https://www.youtube.com/watch?v=on1hJ6QyHaI>  
right elbow traces side-up feathers, left elbows trace neck feathers up, fingers trace out face feathers
214. Hoopoe: <https://www.youtube.com/watch?v=18w2Mli-APw>  
again with left fingers make the crown feathers and then fold them
215. Northern bee-eater: <https://www.youtube.com/watch?v=rEfoiJO5X6s>  
body pressed up against the “back wall”
216. Spotted palm thrush: <https://www.youtube.com/watch?v=eR4sccEVtIQ>  
twitches in lower shoulder blades
217. Decken’s hornbill: <https://www.youtube.com/watch?v=qkNDoGpK6FE>  
counterbalance the heavy beak, one step back on right foot
218. Namaqua dove: [https://www.youtube.com/watch?v=qwx\\_x4zFvmo](https://www.youtube.com/watch?v=qwx_x4zFvmo)  
quick up down, demi-pointe one leg
219. Western bluebill: <https://www.youtube.com/watch?v=FOveY8Yf1Fo>  
back of head leads swoop to left
220. African quailfinch:  
quail “duck” to get out of it onto left foot
221. Furrows billed barbet: <https://www.youtube.com/watch?v=GMtdtEUMtZg>  
chug forward on right, feeling beard feathers
222. Brown Winged mousebird: <https://www.youtube.com/watch?v=vv5zMIufWe8>  
bad tap dancing shift shuffles to left
223. Turquoise parrot: <https://www.youtube.com/watch?v=gjicoAi7qpkU>  
waddle in the right ankle, then delicate peck with toes to flat
224. Budgie: <https://www.youtube.com/watch?v=iSIqA016MWU>  
swarm of budgies rising (to shoulder height)
225. Hooded parrot: <https://www.youtube.com/watch?v=gWkfa8dYbA4>  
focus right, left, shuffle right, focus right (parrot on branch)

226. King quail: <https://www.youtube.com/watch?v=vIofTHnXZqU>  
sensing little walks across collarbone right to left
227. Crested pigeon: <https://www.youtube.com/watch?v=vmWjSHVaI8I>  
Come to flat back, foot hops different directions
228. Masked finch: <https://www.youtube.com/watch?v=8NdQWUrRbMw>  
right leg parallel attitude flat back spiraled
229. Black throated finch: <https://www.youtube.com/watch?v=XtQIdH-8CcI>  
left heel up and down, then feet together into...
230. Laughing kookaburra: <https://www.youtube.com/watch?v=S0ZbykXlg6Q>  
Look up diagonal, dive down forward, lunge to upstage right corner
231. Blue faced honeyeater: [https://www.youtube.com/watch?v=QcsYx8u\\_vrc](https://www.youtube.com/watch?v=QcsYx8u_vrc)  
three relaxed bumpy train hops to bring feet together
232. Wonga pigeon: <https://www.youtube.com/watch?v=FOUpQhtYg3Y>  
one chest pulse to left
233. Kea: <https://www.youtube.com/watch?v=bxoCuRuHlt8>  
push right shin hard to the side, then out of it to stand facing other upstage corner
234. Capped wheatear: <http://www.hbw.com/ibc/video/capped-wheatear-oenanthe-pileata/adult-bird-ground>  
brush the bandit eyes back, quick
235. Madagascar teal: [https://www.youtube.com/watch?v=FKG\\_uT9ZpE0](https://www.youtube.com/watch?v=FKG_uT9ZpE0)  
pump and fluff in right hand
236. Violet plantain eater: <https://www.youtube.com/watch?v=pG5sgTeD-5E>  
“Dani’s tap dance”
237. Blue capped cordon bleu: <https://www.youtube.com/watch?v=1A7dqioZelo>  
finch head swim, vibrating chest throat
238. Cutthroat finch: <https://www.youtube.com/watch?v=PR5oQSesd80>  
back of hands trace cutthroat
239. African yellow white-eye: <https://www.youtube.com/watch?v=PR5oQSesd80>  
right elbow as the fast twitches of the white eye
240. White winged wood duck: <https://www.youtube.com/watch?v=59OqLVWOoyk>  
wing flight in left shoulder on an angle, pulses, then spiral to turn
241. Nicobar pigeon: Toronto  
delicate plumage turnaround to left up corner
242. Crested partridge: <https://www.youtube.com/watch?v=Gm3bM0E05-w>  
space hold with outstretched right arm
243. Chestnut backed thrush: [https://www.youtube.com/watch?v=Z\\_ABdWFqc70](https://www.youtube.com/watch?v=Z_ABdWFqc70)  
trace eye feathers straight down left leg with arm
244. China nightingale: [https://www.youtube.com/watch?v=4C\\_HdH9uR30](https://www.youtube.com/watch?v=4C_HdH9uR30)  
top of head reaches out suspends...then drops down again
245. Bali myna: <https://www.youtube.com/watch?v=7QwvfcvQftA>  
leading with top of head to peak/beck then reverse back down
246. Asian fairy bluebird: <https://www.youtube.com/watch?v=vyaOWizbfVk>  
three hops around the half circle, travelling
247. Bornean starling: <https://www.youtube.com/watch?v=eJbkQZQbskU>  
splayed reaching to be fed baby, arms uneven

248. Blue grey tanager: <https://www.youtube.com/watch?v=bK9HbEbV7HA>  
sensing (as preparation) the pale-ness at the top, descending into strong burst of color to end, turning
249. Black faced dacnis: <https://www.youtube.com/watch?v=Gmbqbp-BYWA>  
let-me-outta-here shunt jump on right
250. Cuban grassquit : <https://www.youtube.com/watch?v=M19BfoDgvBk>  
crisscross blanket around right knee
251. Mountain parakeet: <https://www.youtube.com/watch?v=QYs3YAnhioQ>  
gentle Fred Astaire forward back with left foot (spiral spiral)
252. Sunbittern: Toronto  
Fold out leg wings, fold back in
253. Purple honeycreeper: <https://www.youtube.com/watch?v=uSh9X4GYGr4>  
right shoulder arcs up over describing beak (hover demi-point)
254. Blue cotinga: <https://www.youtube.com/watch?v=c5GtaJeRfw>  
up and down ½ circle with torso staying on right leg
255. Black and white seedeater: <https://www.youtube.com/watch?v=Phmp7cVIn3w>  
invert knees and hands down the middle on right to fall left
256. Blue grosbeak: <https://www.youtube.com/watch?v=DKiXVn6okZc>  
reach step to left, then turn
257. Ruddy ground dove: <https://www.youtube.com/watch?v=l-UrJfCyssY>  
Three backward pecks in a circle (body part of choice)
258. Collared aracari: <https://www.youtube.com/watch?v=8xEjJOM6JMo>  
low diagonal back reach with right hand and fast palm flutter
259. White fronted amazon: [https://www.youtube.com/watch?v=Rs\\_kgytN3U0](https://www.youtube.com/watch?v=Rs_kgytN3U0)  
off-centre posture swivel to front corner
260. Scarlet headed blackbird: <https://www.youtube.com/watch?v=ga6W32xSaGU>  
tiny off-balance hover on left foot
261. Cuban amazon: <https://www.youtube.com/watch?v=D-A33rHWjuM>  
pink green purple chaos downwards, with tiny green tail pop
262. Crested quail dove: <https://www.youtube.com/watch?v=iBaRM0ZYV2w>  
light fingertips tracing neck feathers, air
263. Military macaw: <https://www.youtube.com/watch?v=D6qXzJ-osyo>  
back tail feather arabesque left leg
267. Red tailed black cockatoo: <https://www.youtube.com/watch?v=hpzjb698WcA>  
Extend head to spiraling front right diagonal arch. Add crooked, contract tail forward.
268. Palm Cockatoo: <https://www.youtube.com/watch?v=Eicdz4eKcjU>  
curl top of head over to right, and stamp the left foot on branch (twice?)
269. Hyacinth macaw: [https://www.youtube.com/watch?v=rcS\\_jRu916Y](https://www.youtube.com/watch?v=rcS_jRu916Y)  
Bullet dive forward
270. Major Mitchell cockatoo: <https://www.youtube.com/watch?v=UEfWcTsuflI>  
head duck dive to right
271. Galah: Toronto  
Knee is bird drinking
272. Blue fronted amazon: <https://www.youtube.com/watch?v=dTkZeNFAy00>  
focus left, then right turning whole body



273. Red-lore amazon: <https://www.youtube.com/watch?v=Uonyew2INXs>  
two parrot walks to the side, allowing weight to shift onto foot before body moves
274. Blue winged macaw: <https://www.youtube.com/watch?v=Tn2LiMdLQUc>  
looking around with parrot eyes in chest points and upper back points
276. White eared bulbul: <https://www.youtube.com/watch?v=f8A2hV5QEzY>  
tip torso right, left, quarter turn, then turn torso up right while stepping across with left foot
277. Eclectus parrot: <https://www.youtube.com/watch?v=7PI5QJqMQzA>  
head swoop left right with duck under and up (impossible!), then down
278. Rainbow lorikeet: <https://www.youtube.com/watch?v=4y2JvXoqVD4>  
lorikeet's landing all around me (as hands, feet as an option)
279. Common emerald dove: <https://www.youtube.com/watch?v=FsS8awy-wIg>  
stroke blue head feathers back with left hand
280. Orange Fronted fruit dove: [https://www.youtube.com/watch?v=STRkz\\_6oSU4](https://www.youtube.com/watch?v=STRkz_6oSU4)  
move into the red dot on nose, both hands cup
281. Red Vented bulbul: <https://www.youtube.com/watch?v=NdzBO5ksyt8>  
right hand slap/land on thigh to little turn
282. Tricoloured parrot finch: <https://www.youtube.com/watch?v=dZcFpW9Mo1s>  
rib cage opens floats on water both
283. Black-naped dove: <https://www.youtube.com/watch?v=JQewziSluPM>  
draw pigeon head with right knee, over then under
284. White eared catbird: <https://www.youtube.com/watch?v=IOyblfTrOxQ>  
three descending right knee out, shifting to side
285. Goldie's lorikeet: <https://www.youtube.com/watch?v=3FbawK4Ix2A>  
another under reverse head to come upright
286. Cinnamon ground dove: <https://www.youtube.com/watch?v=-YFtA4PZvPA>  
fast left ball of foot pulses
287. White helmets hornbill: <https://www.youtube.com/watch?v=s3SxpSrc7e0>  
top of crown under my left leg lets it fly
288. Black headed woodpecker: <https://www.youtube.com/watch?v=v7zVdu8g258>  
press forward into branch  
RAPTOR DREAM (22 Species)
289. European honey buzzard: <https://www.youtube.com/watch?v=dh0al5iubSI>  
look down look up twice, showing back of upper back, looking in different places on the up and back
290. Griffon vulture: [https://www.youtube.com/watch?v=hd785MLBZ\\_Q](https://www.youtube.com/watch?v=hd785MLBZ_Q)  
vulture wings in pelvis moving upstage (right toe)
291. White headed vulture: <https://www.youtube.com/watch?v=V79vcD-wz2o>  
feel the light breeze on your feather
292. Hooded vulture: <https://www.youtube.com/watch?v=Rr6RhAvLejw>  
wind concentrated on the neck feathers, direction changes
293. Egyptian vulture: <https://www.youtube.com/watch?v=o3YnzvTZPQ4>  
wing in the left-hand-feather, articulate, moving into forward diagonal adding other wing
294. Bearded vulture: <https://www.youtube.com/watch?v=zxj9YO4Qtx0>  
bank flip right
295. Palm nut vulture: <https://www.youtube.com/watch?v=bTJ2MDtGPfU>

bent to feed, pull to rebound, return bent knees

296. Bald eagle: Toronto  
Hands as two eagles, joining and separating to turn

297. African fish eagle: <https://www.youtube.com/watch?v=sJCcqGnOVrY>  
talons reach and spread forward, weight goes with and then against, eyes on prize

298. American kestrel: <https://www.youtube.com/watch?v=Z67oh7ev008>  
“owl” neck in right knee, slightly staccato it turns and turns back, double poke forward

299. Southern crested caracara: <https://www.youtube.com/watch?v=QpbeK9tsLY4>  
dangle left talon dangle, then echo the horizontal stripes in right leg rotation

300. Brahminy kite: <https://www.youtube.com/watch?v=E-Cq6RCAqYM>  
with left clavicle, tracing side skull and beak (let head go with on the last beak curve)

301. Spot bellied eagle owl: <https://www.youtube.com/watch?v=LATiLRwW9IA>  
Opposite corner, turn head, turn body

302. Barred eagle owl: <https://www.youtube.com/watch?v=4r577ytYTZM>  
sideways walks along branch, face/eye feathers on ribcage and eyes

303. Snowy owl: Toronto (standing)  
Come up onto hands, ripple contraction into release send the body forward onto right leg (shifting back) then contract over, rising halfway through clavicle wings, then come up with windy feather foot, still focus

304. Northern white-faced owl: <https://www.youtube.com/watch?v=svhc8qxCigE>  
eyes as rib-hip connection, closing one then the other (transformer includes turn in and out of legs)

305. Spectacled owl: Toronto  
Head in chest, half semicircle upwards, turn right, then half semicircle to left downwards ending

306. Brown wood owl: <https://www.youtube.com/watch?v=5V5vwJCPstk>  
feel the soft feathers split down middle and tiny edges, then little head arc up and over

307. Great grey owl: <https://www.youtube.com/watch?v=s-CG1RS0Qg0>  
with hands, tracing the small to bigger face circles

308. Pied crow: <https://www.youtube.com/watch?v=9E4UPdBiSgE>  
body squat to the ground

309. White necked raven: <https://www.youtube.com/watch?v=Nrmj0fiUJAc>  
speak with the throat

310. Northern hornbill: <https://www.youtube.com/watch?v=O7QFmVpdKK0>  
three bobs

PIG PEN (5 Species)

311. Babirusa: Toronto  
startled!!

312. Visayan warty pig: [https://www.youtube.com/watch?v=dj2Qfr9sb\\_s](https://www.youtube.com/watch?v=dj2Qfr9sb_s)  
prehensile snout in one foot, then the other, moving backwards

313. Bearded pig: <https://www.youtube.com/watch?v=F4TwM8xisMQ>  
trace bizarre profile with right rib cage

314. Red river hog: Toronto  
head flap to shake ears, then shake right foot out, stepping forward and letting arm

315. White bellied peccary: <https://www.youtube.com/watch?v=5qncJ93FqZ4>  
group of peccaries, plant their hooves – some bow-legged, some knock-kneed

## BEAR DEN (6 Species)

316. Sloth bear: <https://www.youtube.com/watch?v=Cts9bULJ6ds>

hey! Step, step back, down

317. Asiatic black bear: <https://www.youtube.com/watch?v=0Y36R6rSNKg>

back legs ambulating black bear (loose hip joints)

318. Tibetan bear: <https://www.youtube.com/watch?v=0Y36R6rSNKg>

onto back legs, back up and rotate

319. Coati: <https://www.youtube.com/watch?v=pLe0JHXw7Q4>

left leg as tail coming through, hands scratch, head coming down

320. Beaver: Toronto

Sawing logs repetition

321. African wild dog: [https://www.youtube.com/watch?v=6wo\\_nv5zDc](https://www.youtube.com/watch?v=6wo_nv5zDc)

(while on one leg) tracing the ears with hands, stepping across, then 'alert', hands drop

## WATER BABIES (8 Species)

322. South African sealion: <https://www.youtube.com/watch?v=pY5UfFrv0Sg>

fast dive swim, wriggle-wriggle

323. King penguin: <https://www.youtube.com/watch?v=26CsimBFxrQ>

Two homolateral walks left right

324. Southern rockhopper penguin: <https://www.youtube.com/watch?v=FwPdmK2EYEk>

Two swim undulations in place and 3 arm swift currents forward, last one leading off

325. California sea lion: <https://www.youtube.com/watch?v=FsH8CLVrTGY>

sea current flippers side to side, moving fronts

326. Oriental small clawed otter: <https://www.youtube.com/watch?v=QeGtZqjy3xk>

catch a fish wrist fin clap

327. European seal: <https://www.youtube.com/watch?v=M7or3TBWFk0>

strong initiation of head into spiral turn with second clap

328. African penguin: <https://www.youtube.com/watch?v=P68lf0JAMBg>

Penguin walk USL, hiccup to corner, head bob forward/back

329. Humboldt penguin: <https://www.youtube.com/watch?v=Ts4PyQ9G8Gg>

hop up, then flat-footed walks to return to diagonal

## THE AVIARY (9 Species)

330. Maguari stork: [https://www.youtube.com/results?search\\_query=maguari+stork](https://www.youtube.com/results?search_query=maguari+stork)

take off my lean forward, arch and fly forward on left foot, inner thighs

331. 3Black stork: <https://www.youtube.com/watch?v=p5r-Hayo40Q>

lean forward more to step through, head plunge-dives, repeat other leg

332. Scarlet ibis: <https://www.youtube.com/watch?v=DmdJgsvF82c>

One backwards knee walk left foot

333. Magpie goose: <https://www.youtube.com/watch?v=IrVjqXm6dsE>

one magpie up in right arm, one in body, left hip/thigh

334. Southern yellow billed hornbill: <https://www.youtube.com/watch?v=jPPyQ-vacuc>

left back leg as pinfeather, hooked twisted bill with hands together

335. Common goldeneye: <https://www.youtube.com/watch?v=9Fwi9Di-RjU>

left arm as back body, head arches to touch

336. Eurasian spoonbill: <https://www.youtube.com/watch?v=nFoXVDrOGL0>

arms as hornbill figure eight

337. Black faced ibis: Toronto  
quavering throat in inner thighs, two steps forward
338. Condor: <https://www.youtube.com/watch?v=cG8ZB4akl6w>  
moment of flight, drop to land (on back heels), two small steps legs spread arms spread  
THE COWS (10 Species/Breeds)
339. African buffalo: <https://www.youtube.com/watch?v=W9w0OadktGI>  
ear uneven flap with hands, while tracing left horn with head/torso
340. Anoa: <https://www.youtube.com/watch?v=6EQvqbiNg0o>  
two head butts in a circle, second one with push down of hoofs at the end and a jump to travel
341. Javan banteng: [https://www.youtube.com/watch?v=VHD5G\\_nVFR4](https://www.youtube.com/watch?v=VHD5G_nVFR4)  
backing up head shake while right arm traces horn
342. Hinterwaldner:  
loose neck skin down inside of right leg (small)
343. Gaur: Toronto  
foot down left arm right arm, hum drop, tail swish-swish
344. Water buffalo: <https://www.youtube.com/watch?v=FC7p33eCiWQ>  
flatten the water ears tight left right (fast)
345. Wisent: <https://www.youtube.com/watch?v=2kxT7fBKszs>  
tail slaps the bum several times while rising onto right demi-pointe
346. Bison: Toronto  
Lower heel straight leg, 1 bison slap
347. European water buffalo: <https://www.youtube.com/watch?v=sFseMmqZzOk>  
trace big right circle horn and step across on right
348. Wild yak: Toronto  
Heavy hair grows everywhere in spiraling downward patterns, deliberate step on right leg  
DEAR DEERS (13 Species)
349. Fallow deer: <https://www.youtube.com/watch?v=pbyWUxs0pg>  
two sets of antlers, one in forearms, one in chest, fighting
350. European caribou: Toronto
351. Mongolian gazelle: <http://www.arkive.org/mongolian-gazelle/procapra-gutturosa/video-00.html>  
bum out, clunky knee-knee fall, spiral to ground leaving left arm behind
352. Visayan spotted deer: <https://www.youtube.com/watch?v=kn3gO6Gr1io>  
left right little hoofs, arch, fell the spots along the right side of body
353. Chital: <https://www.youtube.com/watch?v=AlSt2mT8ztw>  
prepare right arm and jump with knee crawl
354. Water deer: <https://www.youtube.com/watch?v=X0yLkb65H98>  
tooth fang to tiny hoofs
355. Musk deer: <https://www.youtube.com/watch?v=nw5HZ3uQwO0>  
ear, neck, head
356. Southern pudu: <http://www.arkive.org/southern-pudu/pudu-puda/video-08.html>
357. Sika deer: <https://www.youtube.com/watch?v=9WtTpAegcJk>  
shift snaky back, then forward to step
358. Chinese muntjac: <https://www.youtube.com/watch?v=TWLYfasFEOc>  
up and down silent stamps, right then left

359. Grey crowned crane: Toronto  
dive forward on right leg and shake tailfeathers, then dive head forward and come up on demi-point
360. Pere David's deer: <https://www.youtube.com/watch?v=uHM8Gci0378>  
trace whole horn each arm different timing ending back, then shake the whole torso
361. Barasingha: <https://www.youtube.com/watch?v=2BIbR950e9g>  
trace the front horn with right leg front, left horn with left leg side (showing)
- MIGHTY DUCKS (14 Species)
362. White fronted goose: [https://www.youtube.com/watch?v=HYPyMs3\\_v88](https://www.youtube.com/watch?v=HYPyMs3_v88)  
tail feathers in hands spreading behind, little demi-pointe
363. Bar Headed goose: <https://www.youtube.com/watch?v=6juyHTagSdU>  
feeling of feather stripe below left ear down to left knee
364. Barnacle goose: <https://www.youtube.com/watch?v=oeJHW5n-PXY>  
pulse in ribs echoing black feathers
365. Chilean wigeon: <https://www.youtube.com/watch?v=YK4RJV2klQ>  
vibrating, slightly pitched forward
366. South American shoveler: [https://www.youtube.com/watch?v=Dz-sc\\_Q7YC0](https://www.youtube.com/watch?v=Dz-sc_Q7YC0)  
little direct glide left
367. Mandarin duck: Toronto  
five duck walks u.s.l
368. Rosy billed pochard: <https://www.youtube.com/watch?v=taPRGhTp4tk>  
pink bill face reached to d.s.l
369. Ruddy duck: <https://www.youtube.com/watch?v=3o4ziiL7k9o>  
fast bill pecks, two even rib pecks, both in right arm/hand! left forearm fast bend as feather
370. Goosander: [https://www.youtube.com/watch?v=JcYu-41F\\_Cc](https://www.youtube.com/watch?v=JcYu-41F_Cc)  
little step across with left foot and swivel turn (back of body first)
371. Black necked swan: <https://www.youtube.com/watch?v=CecxxnBQLLM>  
weight into back of body, then two big swinging steps right and left
372. Eurasian wigeon: <https://www.youtube.com/watch?v=a04tSbE7EGc>  
head directly left then right, takes it into little step with left foot. Small look up left diagonal
373. Falcated duck: <https://www.youtube.com/watch?v=gy3vxSowHH8>  
left fingers trace feathers as though on water, dropping down at end
374. Northern pintail: <https://www.youtube.com/watch?v=gKU42FkOd2o>  
2 birds – flutter left foot, dive left arm following into dive left leg starting at hip joint, then left then right bent arms and shoulders flutter up
375. Pochard: [https://www.youtube.com/watch?v=u6YGhK\\_NTqI](https://www.youtube.com/watch?v=u6YGhK_NTqI)  
pochard vista ~ knees and elbows float apart from each other, then slowly rotate however which way
- HORNY RHINO (5 Species)
376. Kirk's dik dik: <https://www.youtube.com/watch?v=oD043mgCY-U>  
three, then two more spirit hops d.s.l.
377. Sable antelope: <https://www.youtube.com/watch?v=4GHJT2WA50>  
Trace back horns/head/arch
378. Red duiker: <https://www.youtube.com/watch?v=rSJ1bmevQlg>  
recover by swivel on left leg and find parallel horns with hands pointing down

379. Okapi: <https://www.youtube.com/watch?v=JUoOCrbV3ZQ>  
 forearms become ears, left leg feels the traces of beautiful velvet fur markings

380. White rhino: Toronto zoo  
 Right arm drops as tail, then back foot traces rhino horns (both)  
 OVER THE BRIDGE (26 Species)

381. Llama:  
 head upper body roll as neck

382. Giant anteater: <https://www.youtube.com/watch?v=wBQozuDXUhQ>  
 \*press-board anteater (like panda) then sharp skinny

383. Southern seriama: <https://www.youtube.com/watch?v=u5uG-OSuw-E>  
 three backwards-ankle joint walk round to sr corner, upper body peck, then backwards on right foot

384. Coscoroba swan: <https://www.youtube.com/watch?v=RVUh1LOMbYA>  
 elbows fold in as swan neck, as does high left thigh parallel

385. Guanaco: <https://www.youtube.com/watch?v=Elwrw4xyT1E>  
 head/ear retreat roll to floor

386. Mara: <https://www.youtube.com/watch?v=km4LQuDfqBs>  
 back scratch roll to us, head up, more scratch, little scratch roll back ds, into

387. Capybara: Toronto  
 Rest on elbows, tickle to collapse, return to elbows

388. Rhea: [https://www.youtube.com/watch?v=AuU65NLiQ\\_8](https://www.youtube.com/watch?v=AuU65NLiQ_8)  
 fluff arms and steps, arms reverse up and over (high), then head comes out crookedly, into the corner

389. Red kangaroo: <https://www.youtube.com/watch?v=8QteNuwp0cQ>  
 1) left calf as leg and arm as tail, connect twice  
 2) male puff up mating stance, hang out

390. Parma wallaby: <https://www.youtube.com/watch?v=r7PWTmMA480>  
 stay, and forearm wallaby play-fight altercation

391. Emu: Toronto  
 emu runs, chest side to side, internal life breakaway to centre, come back,  
 Slow dunk water sip, fast-fast recover

392. Alpaca: repeat  
 Banking to the right leading with head (tight turn)

393. Przewalski's horse: Toronto  
 Leading with bellybutton, wrap around other horse and press into. feel wind

394. Ostrich: Toronto  
 Prance. Prance prance. Collapse.

395. Springbok: <https://www.youtube.com/watch?v=8Ba3UxqXiXU>  
 up onto hands arched, 2 springbok hops legs off

396. Blesbock: <https://www.youtube.com/watch?v=op2qaRW0ymU>  
 right elbow traces horns on the get up (left leg right leg) then right hand brushes down the white mask

397. Greater kudu: <https://www.youtube.com/watch?v=wg8opPMfHgU>  
 two horn spiral little jumps to dl, then one tracing horn with right arm  
 back over the bridge

398. Scimitar horned oryx: <https://www.youtube.com/watch?v=FDzdbJRvWoo>  
Helen arm as horn starting at waist, swivel on left leg
399. Abdim's stork: <https://www.youtube.com/watch?v=6akYvR2rWq0>  
wing open transition, soft, weight onto right leg
400. Cattle egret: <https://www.youtube.com/watch?v=hGmQ292qppo>  
three steps "away" from cow audience
401. Grevy's zebra: <https://www.youtube.com/watch?v=AIE9Qz-HVT8>  
10 vertebrae arches staying low
402. Defassa waterbuck: [https://www.youtube.com/watch?v=ZGAynTs\\_Y1A](https://www.youtube.com/watch?v=ZGAynTs_Y1A)  
waterbuck in right hand, horns growing out of wrists, battle
403. Bongo: <https://www.youtube.com/watch?v=-n4ubmJc2UE>  
stroke the circular belly stripes softly with right arm, "bourre"ing up right
404. Common eland: <https://www.youtube.com/watch?v=esYUsABFAtU>  
stroke turns into swap up and over head, arm as tail
405. Plains zebra: <http://www.arkive.org/plains-zebra/equus-quagga/video-00.html>  
tracing zebra striped across down tors, turning left then right
406. Gemsbok: <http://www.arkive.org/gemsbok/oryx-gazella/video-06.html>  
singular horn, (legs together) spirals from the base up to the head, ending in hop  
RED MEAT (12 Species)
407. Lion: Toronto  
Fast turn into slow-mo pounce, lolling in grass, recovering face first
408. Ring tailed mongoose: <http://www.arkive.org/malagasy-ring-tailed-mongoose/galidia-elegans/video-11.html>  
look up over left shoulder, then quick snake left, and then quick feet one-one
409. Sand dune cat: <https://www.youtube.com/watch?v=EeZY3rc-Bp4>  
knee squat, playful three shifts
410. Rusty spotted cat: <https://www.youtube.com/watch?v=U2z6UZ2Sa5I>  
paw dip in water and shake (focus away)
411. Slender tailed meerkat: Toronto  
standing meerkat facing front
412. Giant anteater: see above  
press-board anteater (like panda) then sharp skinny
413. Tayra: <https://www.youtube.com/watch?v=Wm9wTq2IqMA>  
(mini) look right, left w/step, up, down
414. Jaguarundi: <https://www.youtube.com/watch?v=c47H5rP6rY0>  
easy reach step-up with right arm
415. Narrow striped mongoose: <https://www.youtube.com/watch?v=PHtAF6UCZ3w>  
each arch in foot is a mongoose, playing, away from and some jumping over
416. Ocelot: <https://www.youtube.com/watch?v=PS4fRKfYDsg>  
gliding ocelot waltz
417. Fossa: <https://www.youtube.com/watch?v=B5ABUJRGZKg>  
left two fingers are the face, right hand is the tail, they reach away from each other to eternity
418. Dwarf mongoose: <https://www.youtube.com/watch?v=3TvAdSo4J4w>  
left arm bobs as head, then fast jump/gather back, onto floor  
NIGHT CRAWLERS (19 Species)

419. Senegal bushbaby: <https://www.youtube.com/watch?v=Klf6vmwPEmU>  
push off hand-hand and bog eyes up to the ceiling ready to jump, legs “together”
420. Aardvark: <https://www.youtube.com/watch?v=dMm9-aqmlb4>  
digging legs together back
421. Springhase: <https://www.youtube.com/watch?v=P0bGmYi8L44>  
slump house over hands by ears
422. Senegal galago: <https://www.youtube.com/watch?v=VGpWHCK1fAY>  
three face arches to the left
423. Aye aye: <https://www.youtube.com/watch?v=Fw2DtZYJuiI>  
head turns and listens, middle digit searches with sounds
424. Pallid gerbil: <https://www.youtube.com/watch?v=R6V4SqfntwQ>  
roll over and scratch the warm body
425. Slow loris: <https://www.youtube.com/watch?v=kTR6wR6yPw>  
inside out roll-over with beastly wave contraction
426. Mouse lemur: <https://www.youtube.com/watch?v=H6cJojZn5g4>  
tummy side to side as head
427. Kinkajou: <https://www.youtube.com/watch?v=WAONSVdSY14>  
sideways hang, plank, right leg left leg
428. Night monkey: <https://www.youtube.com/watch?v=EmEuSFdUags>  
crawl, leaving head behind, ending with right angle in right arm
429. Hairy armadillo: <https://www.youtube.com/watch?v=nPuOQxJOqh0>  
round armadillo rounded joints opening, angled to front
430. Merriam’s kangaroo rat: <https://www.youtube.com/watch?v=mBANK-b7umI>  
release in pelvis, tiny kangaroo hops shifting forward in pelvis
431. Fennec fox: <https://www.youtube.com/watch?v=M2-kL-vxnoY>  
tracing of the ears, right arm then left, same direction
432. Vampire bat: <https://www.youtube.com/watch?v=iLp-ls8AoaU>  
sideways crawl, left hand right hand, little clunky knees, sliding left hand
433. Rock cavy: [https://www.youtube.com/watch?v=M5-u5Zk9K\\_g](https://www.youtube.com/watch?v=M5-u5Zk9K_g)  
curl into ball
434. Long tongued bat: <https://www.youtube.com/watch?v=nIWxsW9KYhk>  
head drinking in asymmetrical arm flower
435. Short tailed bat: <https://www.youtube.com/watch?v=CQLft28wqrY>  
little bat right hand flies away
436. Arnella mole rat: <https://www.youtube.com/watch?v=X3NrvqU9Awo>  
extend, then make mole rat fold in fight shoulder blade (folding left leg prep)
437. Cururo: <https://www.youtube.com/watch?v=y9ZeyI37DU8>  
standing on diagonal forward, then diagonal pitch forward left leg arms as tre  
WHISKERS (4 Species)
438. Palawan Bengal cat: <https://www.youtube.com/watch?v=KjUXR1Fh0N8&feature=share>  
in little pitch, hug arms tree and shiver shoulders, opening a bit
439. Leopard: <https://www.youtube.com/watch?v=KJBIO8oO0WA>  
extend on diagonal, then sequentially starting with pelvis luxurious curl around
440. Jaguar: Toronto  
three stalking steps toward Canada



441. Tiger: Toronto  
slinky tiger plank