Animals and their Artists: An Exploration of Impossible Encounters

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Abstract

This research looks at the representation of animals in artistic practice to interrogate anthropocentric principles. I argue that the individuated and discrete human self – typically white, male, able-bodied and heterosexual – in possession of consciousness, rationality, empathy, a voice, and a face, is open to challenge by nonhuman capacities such as distributed cognition, gender ambiguity, metamorphosis, mimicry and avian speech. In traditional philosophy, animals represent all that is lacking in mankind. However, this dissertation argues that just because we frame 'the animal' as a negative term, our binary opposite and everything we are *not,* does not mean that animals have no meaning in themselves. Rather, animals in their very *unknowability,* mark the limits of human thinking.

I analyse a selection of artistic representations of nonhuman animals which emphasise and experiment with these limits. The artists chosen all work *with* animals to create spaces where animal meaning takes centre stage and human meaning is side-lined. The marine life documented by Jean Painlevé and the praying mantis who disturbs Roger Caillois establish an erotic, subversive and Surrealist opening. I then shift to more recent exhibition of spiders (Tomás Saraceno) and silkworms (Candice Lin and Kumi Oda), bees and Glofish (Pierre Huyghe), parrots (Jennifer Allora and Guillermo Calzadilla) and 'the animal within' – brought to life as our primate kin (Huyghe). Each of these works places their human viewers in new territories and modes of relating to animal others, something increasingly vital in our current context: the rapid extinction of species, ecological collapse and the arrival of climate change at the hands of (some) *Anthropos*.

If we look beyond human language, what wealth of material can be unearthed? By learning more about nonhuman ways of life, how are principles such as anthropocentrism, patriarchy and gender normativity destabilised? I identify examples of human traits amongst animals, positioning other species in unusual alliances with identities typically assumed to be human. But at the same time, I interrogate the superiority of these human traits in comparison to the wealth of abilities other animals have that humans do not, such as the sensuality of spiders, the tactility of octopuses, the metamorphosis of silkworms or the collective organisation of bees. What happens to human subjectivity when faced with these radically other ways of being? When answering these questions, I elevate the status of animals from that of 'the other' to individuals mattering in their own right.

To establish my argument, I align Derridean deconstruction with Critical Animal Studies theory, including that of Donna J. Haraway and Lynn Turner, as well as the unthought of N. Katherine Hayles and Xenofeminism's embrace of alienation. I combine this discussion with the lesser known science theories of Jakob von Uexküll on animal *Umwelten* and Francisco Varela on embodied cognition. I apply a methodology inspired by the porosity and infinite connections of tentacular thinking and entanglement (Haraway) to encompass a range of approaches and positions. I weave animal bodies and knowledges into human bodies and constructions to establish lines of thought, forms and behaviours often overlooked. Through an encounter with these works and the species they exhibit, this thesis establishes a new position where differences are embraced. This is a space of exploration where what humans – with our limited perceptual worlds – cannot and do not want to know materialises.

Declaration

This thesis represents partial submission for the degree of Doctor of Philosophy at the Royal College of Art. I confirm that the work presented here is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

During the period of registered study in which this thesis was prepared the author has not been registered for any other academic award or qualification. The material included in this thesis has not been submitted wholly or in part for any academic award or qualification other than that for which it is now submitted.

Signed: Elizabeth Eleanor Jacqueline Atkinson

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Introduction

The Violence of Language

> Language is not innocent in our primate order. Indeed, it is said that language is the tool of human self-construction, that which cuts us off from the garden of mute and dumb animals and leads us to name things, to force meanings, to create oppositions, and so craft human culture.[1]

Our current moment is one of terrifying ecological collapse. This extends beyond the predominant human concerns for climate change and the accumulation of plastic waste. Factory farming, acidification of the oceans, rapid deforestation, habitat loss, and mass extinction are all dramatically impacting many nonhuman species with extreme, debilitating and fatal consequences.[2] Much of the damage being irreparable, it is not a case of capitalism and technology coming to "the rescue".[3] Rather, a drastic shift in the human relationship to other life – previously understood to be inferior – must occur. This research analyses a selection of artworks that make such a shift available. I have chosen works that focus on animal ways of being in the world, that explore their individual abilities and capacities that reach beyond our human understanding. Animals are no longer othered as resources to be appropriated and exploited by humanity but positioned here as examples of difference with their own inherent values.

Over the history of Western philosophy and metaphysics, anthropocentric thought concerned with the erection of Man above nonhuman species – as well as women and racial and sexual minorities – has led to a gross homogenisation of these Others. They are disregarded, subject to indiscriminate violence and denied any form of subjectivity on their own terms. Animals specifically are sacrificed in the name of humanity – both as food and as expendable resources but also as representative of everything that the human is not. They are judged against humanity – 'the measure of all things' – falling short in these tests and identified only by what they *don't have* or *cannot do*. Animals have thus come to represent all that is lacking in mankind. Language being one of their most identifiable privations has become the most violent tool humans use to determine our distinction from the animal world. Language opens up the space for an oppositional binary

[1] Donna J. Haraway, *Simians, Cyborgs and Women,* (London: Free Association Books, 1991), p.81.
[2] For clarification about my use of terms please see the section 'Language: My Impossible Responsibility' of this Introduction.
[3] See for example Claire Colebrook's discussions of managerialism and biopolitics in *Death of the Posthuman: Essays on Extinction,* vol. 1, (University of Michigan: Open Humanities Press, 2014).

relationship between humans and animals. It prepares the ground for the constitution of both the negative status of the animal and the positive status of the human as rational, speaking, empathic, autonomous and with an ethically recognisable face.[4]

This negative status of 'the animal' has resulted in philosophical dogmas that they are without subjectivity, mere automatons, poor-in-world and without a face, and so banished outside of the human ethical circuit.[5] However this dissertation argues, following Stephen Morton's proposition in his chapter 'Troubling Resemblances' in Lynn Turner's *The Animal Question in Deconstruction,* that just because we frame the animal as a negative term – our binary opposite and everything that we are *not* – does not mean that the "nonhuman animal has no being as such." Rather, animals in their very *unknowability*, mark "a limit in human thinking: it is the otherness of animals and their mode of being in the world from which *humans* are excluded."[6] This dissertation presents certain animals – octopuses, spiders, praying mantises, parrots, bees and silkworms – as deconstructive figures to explode our understandings of limits. They trouble the borders certain humans erect to mark themselves above those they classify as other. And, these animals draw attention to the very limitations of human constructions – including language, technology, representation, science and philosophy – that are often believed to possess infinite capabilities. I analyse a selection of artistic representations of these animals which emphasise and challenge the limits of human knowing. The artists chosen all "work with" the animals to create spaces where animal meaning takes centre stage and human meaning is side-lined.[7] In my view, art is one of the most powerful ways to bring about social change, and as artists themselves increasingly turn to animal life they creatively place human viewers in relation *with* other species in a new territory and way of relating. I combine my analysis of art with science and theory so that the animals themselves allow new readings of established thinking to emerge. This thesis's tripartite framework and the porosity of text and image becomes a space of exploration where what humans – with our limited perceptual worlds – cannot and do not want to know materialises.

[4] Here I refer to Emmanuel Levinas's argument that animals cannot ethically respond to the face of another and are so denied a face themselves and left outside of human ethics.

[5] According to René Descartes, Martin Heidegger and Emmanuel Levinas, respectively. I unpack each of these philosopher's thinking in further detail across this thesis.

[6] Stephen Morton, 'Troubling Resemblances, Anthropological Machines and the Fear of Wild Animals: Following Derrida after Agamben' in *The Animal Question in Deconstruction,* ed. by Lynn Turner (Edinburgh: Edinburgh University Press, 2013), pp. 105-123, p.105, (my italics).

[7] I use the term "work with" term hesitantly here as issues remain around the ethicality of using animals in art without being able to gain their consent. However, the focus of this project is not ethics, but rather the capacity of art made with animals to trouble certain ideologies humans hold about themselves and the world around them. For a light discussion of ethics specifically in relation to Pierre Huyghe's work see Kate MacNeill, 'Contemporary art, animals and ethics: Pierre Huyghe's interspecies worlds' in *The Conversation,* (12 October 2015) available:
http://theconversation.com/contemporary-art-animals-and-ethics-pierre-huyghes-interspecies-worlds-48968, [accessed 23 October 2019].

It is because of the rigidity of human constructions that I turn to artistic practice. I explore artworks that do not solely depend on human language and where humans remain absent from the visual field. What is revealed is the violence inherent to human ways of knowing, a violence performed to repress the perceived threat of otherness to the autonomous human subject. Without the degree of separation that is the human word, a new relationality to other species can be reached as we encounter these animals on their own terms. The human artists collaborate, most often via technology, with the nonhuman animals to create surreal spaces and alternative figurations of animal being. These spaces become cyborgian in themselves, demonstrating the interconnections of art and science, nature and culture, and humans, technology and animals.[8] These practices employ human tools, but at the same time emphasise the artificiality of these prostheses when visualising animal worlds. The artworks chosen each reinforce my argument that animal worlds must always already be mediated and cannot be grasped in themselves by humans. I explore the capacity of art to shatter illusions about the world as fully representable by humans. Animals remain inherently different and unknowable to us, but this should not lead to their disavowal or sacrifice. Rather, a new mode of coexistence must be established if we are to move forward together in this ecological crisis. This challenges us to envision such coexistence emerging out of some surprising associations.

I interrogate how the words and names humans ruthlessly apply to concepts and beings to define and distinguish otherness, create debilitating blind spots and spaces of unthought in their representation of the world.[9] My research probes the questions, if we look beyond human language, what wealth of material can be unearthed? By learning more about nonhuman ways of life, how are principles such as anthropocentrism, patriarchy and gender normativity destabilised? I identify examples of certain 'human' traits amongst animals, positioning other species in unusual alliances with identities typically assumed to be human. But at the same time, I question the superiority of these human traits in comparison to the wealth of abilities other animals have that humans do not, such as the sensuality of spiders, the tactility of octopuses, the metamorphosis of silkworms or the collective organisation of bees. What happens to human subjectivity when faced with these radically other ways of being? I consider how mind over matter distinction is toppled by examples of embodied, extended or disembodied cognition in the animal kingdom. I suggest that when humans are able to look past beliefs in the superiority of mind, they might begin to respect the abilities demonstrated by other species. I argue why nonhuman life *does* matter to us in this moment of ecological collapse, elevating the status of animals from that of humanity's other to individuals

[8] Donna J. Haraway, 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century' in Haraway, *Simians,* pp.149-181.

[9] The human capacity to know has been cemented through an ability to see and thus name. For this reason, the application of homogenising verbal labels will inevitably lead to both blind spots and spaces of unthought as these too are made inaccessible through the triadic relationship of human language, thought and sight.

mattering on their own terms. I weave their bodies and knowledges into human thought and constructions to establish lines of thinking, forms and behaviours normally overlooked.

If humans can construct a relationship to other species in a way not based on othering, then perhaps this can be extended to relationships within our own species as well as to our relationship to the planet in its entirety. If we can begin to stop seeing that which we are not or is not us, not as available for our appropriation and exploitation but with respect and what Donna J. Haraway calls "response-ability", then we might be able to begin to halt the damage we are currently inflicting on our shared home.[10] I demonstrate why art can be more successful than a straightforward scientific representation to facilitate such a human-animal encounter. I propose how and why art provides the space for humans to begin extending hospitality towards other forms of life, a space not normally available in the everyday world.

To answer my research questions, I look to surreal representations of live animals in art (video and installation) produced in the twentieth and twenty-first centuries.[11] These artworks allow me to reposition key thinking by philosophers Jacques Derrida and Donna Haraway, specifically concerning the violences inherent to language and its construction of meaning based on othering. What I identify in common amongst the chosen artworks is their collage of effects – human, animal, technological, artistic, natural and cultural – to create hybrid works which do not point to a pure origin nor stable meaning. These representations highlight the very *unrationality* of animal worlds.[12] These are spaces that remain totally outside of or beyond human knowledge structures. I argue how the otherness of animals both *allures* and *alienates* the human gaze. They captivate us with their radical differences, exploding the limits between us and them, and make visible the limits of our knowledge about the world. Positioned as such *dangerous objects*, these animals reconfigure typical expectations and relationships forcing new associations onto the scene. Alternative alliances erupt – between nature and technology, women and insects, octopuses and psychoanalysis, and art and science – which interrupt, and challenge anthropocentric and patriarchal constructions imposed onto the world.

[10] Donna J. Haraway, *Staying with the Trouble*, (Durham: Duke University Press, 2016).
Haraway's "response-ability" is about cultivating participation in a collective "praxis of care and response […] in ongoing multispecies worlding on a wounded Terra" p.105. This "is about both presence and absence, killing and nurturing, living and dying – and remembering who lives and who dies and how in the string figures of naturalcultural history", p.28. See also *When Species Meet,* (Minneapolis: University of Minnesota Press, 2008).

[11] For clarification of my use of the term "surreal" here, please see the section 'My Non-Objectivity' of this Introduction.

[12] I use *unrationality* here, an unorthodox word, to emphasise how animals and their ways of being cannot be contained by language as we know it.

Germination in *Untilled*

I position this introduction as a reader's guide to the chapters that follow. It presents the interconnecting threads and themes of my project and makes clear from where my thought stems, what concepts I have applied and how my research and writing has taken shape. I am invested in troubling the principles humans use to elevate themselves above the animal world. For this reason, my research combines artistic practice with science and biology in order to understand species' aptitudes in greater detail and to demonstrate to readers the wonders of their invisible worlds. The very un-representability of animal life is made clear in artworks where the human viewer is decentered and alternate meanings abound which cannot always be translated into human signs.

My thinking began to germinate when completing my master's study in 2015. My attention was captured by Pierre Huyghe's *Untilled* (2011-12) installed at dOCUMENTA (13). I read in this work – a living ecosystem of nonhuman players – a challenge to human anthropocentrism about their central position in the world; a world they see as purely for them and of their own making. The indifference of the animals included in the installation to the human viewers reminds us that we are not at the centre of the world – we do not even feature in the *Umwelt* of many other species.[13] We are at once intrigued by the differences of these animal others, curious about their processes, but placed in a position of non-relationality. Experiences of alienation or even threat are provoked in this space. Huyghe undoes the primacy of any one species' perspective to produce "an uncanny view of both art environments and the limited perceptual territories of species." Art historian Amanda Boetzkes explains how through "temporal and affective disruptions" Huyghe cultivates "the viewer's awareness of the very borders that adjoin them to other worlds" provoking a "recurrent awareness of an infinitude of worlds beyond one's own." In his artificial systems, the "boundaries of beings become palpable." For Boetzkes, these are spaces of felt paranoia.[14] For me, these are dangerous spaces of allure and alienation. Incomprehensible and indiscernible activities continue in their own spatialities and temporalities outside of both the artist's and the viewer's control. New agencies are uncovered, and different meanings pointed to. Huyghe's work suggests the importance of nonhuman processes and the inability for humans to fully grasp the world as legible and nameable. It invites viewers into a space to curiously consider the unknowability of other worlds and our relationship to them from a different angle. Our gaze is at once allured by the minutiae of other life

[13] For Bavarian biologist Jakob von Uexküll working in the late nineteenth and early twentieth century, an animal's *Umwelt* is its perceptual lifeworld, within which signifying things trigger chains of events. See *A Foray into the Worlds of Animals and Humans,* trans. by Joseph D. O'Neill (Minneapolis: University of Minnesota Press, 2010).

[14] Amanda Boetzkes, 'Art', in *The Edinburgh Companion to Animal Studies,* ed. by Lynn Turner, Undine Sellbach and Ron Broglio, (Edinburgh: Edinburgh University Press, 2018), pp.65-79, pp.76-77.

yet alienated from ever fully understanding or taking part in it. Anthropocentric supremacy over this space cannot stand.

I have complemented my work on Huyghe with a selection of essays exploring a collection of artworks that I find to similarly interrupt human standard ways of thinking. When making this selection, I spent large proportions of my research time getting to know the individual works themselves and envisioning how they, and my written material on them, would fit together. I encountered the sexually subversive films by French scientist and filmmaker Jean Painlevé when searching for a case study to focus on for the conference I co-organised in 20I7, INTIMATERIAL. I imagined that the body of the octopus strangely encompassed these two concepts of materiality and intimacy, with their elastic shapes and tactile modes of communication. Painlevé's film (made with Geneviève Hamon in 1967) *Les Amours de la pieuvre* [*The Love Life of the Octopus*] for me captured the sexual, intimate and material form of this creature whilst reminding viewers that we can never fully enter the worlds of octopuses. Human knowability is destabilised. I found in the Surrealist writings of the polymath Roger Caillois an interesting complement to Painlevé's films. Caillois's discussions of mimicry and the threatening allure of space could be applied to the processes of the octopus itself, opening up a discussion of Lacanian psychoanalysis with the octopus representing the uncoordinated infant who encounters his reflection in the mirror. Caillois's writings on the sexually carnivorous praying mantis allowed me space to specifically consider gender relations in relationship to Pierre Huyghe's hybrid sculpture *Untilled* (2013). This Surrealist's ideas about a generalised or depersonalised space is what interested most here, providing me with my own space to consider what happens beyond the bounds of human knowledges and constructions. Through Caillois's writings I was able to make a sexual and psychoanalytical connection between Huyghe's contemporary artwork and the Surrealist science of Painlevé and Caillois.

I then move from the erotic bodies of Caillois and Painlevé to the metamorphosing form of the silk/worm. In 2017 I co-organised a symposium called *Silk Unravelled,* and my presentation about the bodies of silk/worms introduced a discussion of animals and subjectivity to an event focussing on materiality and making. I wrote a performative voiceover to Kumi Oda's *Circle of Silk* (2017) video work, speculating on the lives of silkworms and the ethicality of their use for human production whilst displaying the wonderful capacities of these tiny forms. Candice Lin's *The Silkworm (Our Father)* (2016) repositions the colonial commodity of the silkworm as powerful animals able to metamorphose understandings of history and subjectivity. The silk/worm capacity for extended cognition acted as a literal and figurative connection between the Surrealist opening of this thesis and the later chapters' discussions of more recent works by well-established artists. The silk/worm shares its capacity for extended cognition with the spider, creatures also well known for their

tendency towards sexual carnivory. Finding intricate connections between my species choices, the writing and themes of this thesis mirror the connectivity of the animals as its content.

Tomás Saraceno's intricate silk architectures made in collaboration with spiders exemplified to me a form of human-animal collaboration in artistic practice which enabled human viewers to consider animal ways of being they might not typically be exposed to. His work can be compared to Pierre Huyghe's by placing human viewers in direct contact with other species in their own milieus. The fourth chapter therefore shifts to a detailed analysis of Huyghe's practice. I found his 2017 installation *After Alife Ahead,* with its inclusion of both human and nonhuman actants, living and non-living processes, to be an extension of his earlier *Untilled,* only now with an additional technological facet. This installation therefore opened up the possibility for considering the role of technology in our contemporary world and its intricate relationship with humanity and animality. The next step in the development of the artist's oeuvre, *Uumwelt* (2018-9)*,* with its focus on artificial intelligence, although diverting slightly from my human-animal focus, contained some interesting ideas around translation and the need to divert certain forms of knowing in order to access the worlds of other forms of life. The 'Coda' within this thesis, actually being the first piece of writing I produced for this project, narrates my encounter with Huyghe's film *Untitled (Human Mask)* (2014). Presented for my first Work in Progress at the Royal College of Art in 2017, this piece sees the development of my presentation style for performative voiceovers to films that I would make use of throughout this project. Huyghe's eerie presentation of this chimerical human-monkey in the desolate setting of Fukushima fascinates me on a visceral level whilst encompassing key ideas about Derridean hospitality and agency in our posthuman world.

The final chapter of this thesis is dedicated to Allora and Calzadilla's film, made in collaboration with Ted Chiang, *The Great Silence* (2014). I am very interested in language, as a tool that humans use to separate ourselves from animal worlds but similarly to consider the languages of other species that we fail to listen to. When I came across this work at the Wellcome Collection's exhibition *Making Nature: How We See Animals* (December 2016 through May 2017) I knew immediately I wanted to include a response to it in this project. Not only do the artists give this parrot a voice, but their narrative destabilises the supremacy of the human word and their footage allows us a glimpse into a rapidly disappearing world on the margins of human territory. The clever combination of sound, imagery and text envelopes their viewers in a space where what we think we know no longer makes sense.

Each of the artists included in this thesis investigate the worlds of nonhuman life and make these ways of life (partially) available to human viewers. We witness other species responding to an environment and yet are reminded that this representation is an artificial or at least mediated

framing of other life. These representations therefore challenge how we think about animals, our relationship to them, and our own ways of understanding and constructing the world around us. And, these animals are able to surprise and astound us with their amazing capacities and abilities we often deny them or cannot even imagine that they might possess. Animals are not brought into the white cube of the gallery – as in Joseph Beuys' *I Like America and America Likes Me* (1974) – but rather art is repositioned in the realm of the animal. This difference is key if we wish to appreciate the radical alterity of animal worlds on their own terms.

Positioning My Thinking

My primary concerns firmly place this project within contemporary academic discussions around "the animal question" or "nonhuman turn", discussions I return to throughout this thesis.[15] In this section, I outline the initial directions of my reading and the struggles I reached with some of the material. When first encountering Huyghe's work in 2015, I was drawn towards writing which find parallels between *Untilled* and the philosophies of Object-Oriented Ontology (most prominently associated with Graham Harman and Timothy Morton), Vital Materialism (Jane Bennett), and Posthumanism (specifically that of Cary Wolfe). OOO seeks to "discover the meaning which circulates among things, between what they are composed of and what they compose, in us, outside of us, with or without us" explains French philosopher Tristan Garcia.[16] This mode of thought identifies all beings as both composite and compound within a natural cycle of relationships, rather than positioning them upon a hierarchy according to substance related qualities, and could be applied to Huyghe's methods in *Untilled.*[17] For Harman, inanimate objects should be considered in their own autonomous reality, containing a unique and individual essence which forever remains outside of human grasp.[18] This state of withdrawal means that no one thing can ever fully account for any other thing, placing all entities upon a *flat ontology* "in which there is hardly any difference between a person and a pincushion."[19] OOO also argues that thought is not the only mode of access to other beings, decentring human ideologies about the supremacy of rationality. Anthropocentrism

[15] Paolo Cavalieri coined the term "the animal question" with his book *The Animal Question* published in 2001. However, unlike his approach, this dissertation is not an argument for the awarding of human "rights" to animals but rather to understand animals on their own terms. See *The Nonhuman Turn* ed. by Richard Grusin (Minneapolis: University of Minnesota Press, 2015) for discussions of "the nonhuman turn".

[16] Tristan Garcia, 'What is Being Intense?', in *Pierre Huyghe*, ed. by Emma Lavigne (Paris: Centre Pompidou, Paris, 2013), Exhibition Catalogue, pp. 205-213, p.208.

[17] Graham Harman, 'Materialism and Speculative Realism: A Response to Critics,' in *Modern Painters,* (March 2014), pp. 50-51, p.50.

[18] Graham Harman, 'The Third Table' in *Documenta (13): The Book of Books*, (Hatje Cantz, 2012), Exhibition Catalogue, pp. 540-542, p.541.

[19] Timothy Morton, *Hyperobjects*, (Minneapolis: University of Minnesota Press, 2013), p.14.

becomes impossible.[20] These philosophers identify the equality of all beings in the world, and within this system of identical meanings where everything is neutral, all that can be felt across bodies is indifference.

Speculative Realist Timothy Morton focusses on the *spectrality* of beings. He advances Jacques Derrida's notion of the *arrivant* in his concept of "strange strangers."[21] Derrida's is an unpredictable and unaccountable arrival to whom the host must extend "unconditional hospitality."[22] His thinking concerns the "absolute other" who "cannot have a name" and emphasises the fluidity between giving and receiving. *Of Hospitality* contributes to Derrida's conception of "hyperbolic ethics" where notions such as "the gift" and "hospitality" are infinitely deferred to some imagined future – a "democracy to come."[23] I explore both Morton's and Derrida's concepts in 'Coda: Hospitality for Otherness'. Written in the first year of my PhD research about Huyghe's film *Untitled (Human Mask)* (2014), this short bridge between my fourth and fifth chapters reflects my preliminary interests in Morton's work. However, I would later struggle with his application of Derrida's thinking to his own *ecological thought*, which stresses the interdependence of all entities on Earth, our entanglement with other life within a "mesh" in which "nothing exists by itself so nothing is fully 'itself.'"[24] Morton's "mesh" is made up of "infinite connections and infinitesimal differences" reaching out in all directions "without centre or edge."[25] This vision of sprawling life, open-ended and without limits is incongruous with the scientific concepts applied in this dissertation. Jakob von Uexküll's theory on animal *Umwelten* as well as Humberto Maturana and Francisco Varela's theories of *autopoiesis* – two *closed* systems I explain later – cannot be reconciled with Morton's vision of openness, infinite connections and interpenetration across lifeforms.

Jane Bennett's *Vibrant Matter* follows Bruno Latour's "Actor Network Theory" which articulates technical mediation, nonhuman agency and the politics of things. Latour sees society "as a complex assemblage of human and nonhuman actors" without individual autonomy.[26] Latour's and Bennett's Vital Materialist theories both decentre human supremacy and emphasise the importance of action or "actancy" over intention. Bennett's text – using a Deleuzian methodology – argues for the agentic contributions of nonhuman forces such as electricity, food and rubbish "in an attempt to

[20] Timothy Morton, *Being Ecological*, (London: Penguin Books, 2008), p.33.
[21] Timothy Morton, *The Ecological Thought*, (Cambridge Ma.: Harvard University Press, 2010).
[22] Jacques Derrida and Anne Dufourmantelle, *Of Hospitality,* trans. by Rachel Bowlby (Stanford: Stanford University Press, 2000) and Jacques Derrida, 'Hostipitality', in *Angelaki: Journal of theoretical Humanities,* vol.5, no.3 (2000), pp.3-18.
[23] Kelly Oliver, *Animal Lessons,* (NY: Columbia University Press, 2009), p.135.
[24] Morton, *Ecological Thought,* p.15.
[25] Timothy Morton, *Dark Ecology*, (NY: Columbia University Press, 2016), p.81.
[26] Richard Grusin, 'Introduction' in *Nonhuman* ed. by Grusin*,* xviii.

counter the narcissistic reflex of human language and thought."[27] Similar to OOO, Bennett equalises all entities on Earth, living and not, to suggest how "all bodies are kin in the sense of being inextricably enmeshed in a dense network of relations."[28] She argues for "thing-power" to emphasise our "shared material basis, the kinship of all things, regardless of their status as human, animal, vegetable or mineral." Bennett does not deny differences between these entities but defies human efforts to place themselves at the ontological centre.[29]

Through her reduction of all issues to their materiality and her replacement of intention with "actancy" or "thing-power", Bennett's theories trouble me as they risk removing the social and political from the world. Her theory of vibrant matter "presents individuals as simply incapable of bearing *full* responsibility for their effects."[30] I do not refute that no one can take full responsibility for the ecological mess we are in. But it is important to assert the need for (some) humans to take responsibility and action. I do not think the equalisation of human agency with that of all other matter is productive in our moment of crisis. Rather, it seems important to intentionally transform and re-apply our capacities for rationality, empathy, hospitality and compassion in new ways to find a path forward with nonhuman life.

In his outline of Posthumanism, Cary Wolfe describes how during the Renaissance and the Enlightenment – two historical moments which emphasised man's perfectability, rationality and agency – meaning became a form of self-referential recursivity used by psychic systems (consciousness) and social systems (communication) to handle overwhelming environmental complexity.[31] Wolfe's Posthumanism forms a basis for deconstructing the ways humans have presumed to master or appropriate the finitude we share with nonhumans in ways presumably barred to them – these predominantly being knowledge through language.[32] He attends to the human way of being in the world by acknowledging that 'Man' is a prosthetic creature who has coevolved with various forms of technicity and materiality – nonhuman forms that have nonetheless made the human what it is.[33] In this way, Wolfe's ideas advance Donna Haraway's 1989 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century', which sought to decentre the position of man as the measure of all things. Within Posthumanism, human

[27] Jane Bennett, *Vibrant Matter,* (Durham: Duke University Press, 2010), xvi. Bennett's thinking follows Giles Deleuze and Félix Guattari's "material vitalism" comprising Spinozian notions of "affect" and "potentiality". I am not adopting this approach as I find the thinking too abstract and have preferred to take a position which still acknowledges human rationality, as explained here.
[28] *Ibid.*, p.13.
[29] *Ibid.*, p.208.
[30] *Ibid.*, p.37.
[31] Cary Wolfe, *What is Post-Humanism?* (Minneapolis: The University of Minnesota Press, 2010), viii-xx.
[32] *Ibid.*, xxi. Wolfe seeks to remove meaning from consciousness, reason and reflection and re-contextualises human experience in terms of the entire sensorium of living beings.
[33] *Ibid.*, xxv.

nature becomes a mutation that is ongoing and immanent, a system of "processes, which can never be entirely reduced to patterns or standards, codes or information."[34] This is an ethics of "becoming" which hybridises humans, animals and technology.[35] Posthumanism questions the boundaries between nature and culture: assuming human culture to be an open system that has borrowed so much from nonhuman alterity and nature, the opposition between culture and nature can no longer make sense.

Although Wolfe's theories do find a parallel with Haraway's, the critical thinker has firmly positioned herself against Posthumanism in her more recent work. She does not wish to situate herself nor her thinking "after" the human but rather "with" companion species as "messmates at table together, breaking bread": *cum panis*.[36] Her speculative "Camille Stories" about "children of compost" emphasise human roots to lie in the soil or *humus* of the earth we share with all other life. Haraway's vision is one of grounded humility; humans are no longer at the top of the hierarchy but living amongst all other species on Earth. I follow Haraway in thinking that now is not the time to be situating ourselves *after* the human. Rather, it is crucial we *stay with the trouble* and attempt to make the best of the world we have created, for ourselves and for all the other life forms that manage to survive.[37]

Art, Science and Theory

In this thesis I condense critical theory, scientific fact and art analysis to create a new framework for understanding animal life. This PhD does not trace the emergence of animals in contemporary art, a line already tracked in great detail by Steve Baker in his 2000 book *Postmodern Animal.*[38] Rather, I have made a selection of a few works which I feel enhance particulars and expose blind spots in the theories I am examining. My consideration of artistic practice also differs from readings of artwork by thinkers such as Lynn Turner or Haraway who focus predominantly on artists who reassert human-animal companionship and multispecies living.[39] The works I analyse do not portray an ideal human-animal relationship. Instead, these are spaces where human viewers are exposed to otherness and probed to consider animal being from within new frames of reference.

[34] *Ibid.*, xxviii.
[35] See Gilles Deleuze and Félix Guattari, *A Thousand Plateaus,* trans. by Brian Massumi (London: Continuum, 2003).
[36] Haraway, *Species*, p.208.
[37] Haraway, *Trouble*.
[38] Steve Baker, *Postmodern Animal,* (London: Reaktion Books, 2000).
[39] See for example Lynn Turner's analysis of Carolee Schneeman and her cat in 'When species kiss: some recent correspondence between animots' in *HUMaNIMALIA* 2:1, (Fall 2010), pp.60-86 and Haraway's discussion of "sympoietic" art in chapter five of *Staying with the Trouble,* pp.58-98.

I divulge scientific fact to legitimise my claims and allow readers to gain a closer perspective on these animal worlds which remain inaccessible in a purely visual field. This combination of perspectives creates a unique approach which evades blanket categorisation, just as my work itself strives to achieve for certain human concepts including 'human', 'woman', 'man', 'animal' and 'consciousness'. I am interested in understanding and communicating the differences found within the concept of 'the animal' to both challenge the homogeneous use of this word and to consider ways of being that humans typically do not. In so doing, I perform a deconstruction of language itself, with its violent tendencies to disavow types of otherness differentiated from 'the Human' or 'Man'.

One of the most important influences on my thinking is the often-overlooked work of Bavarian biologist Jakob von Uexküll (1864-1944). His writings have been an important foundation for much of the thought within Animal Studies today, including but not limited to Vinciane Despret, Frans de Waal and Thom van Dooren.[40] Without devaluing science as a mode of exploration, Uexküll's methodology and propositions counter traditional scientific objectivity which places animals as things to be viewed under the scrutinous human gaze. He challenges notions of species hierarchy as well as demonstrating the very limits of human understanding when we turn to other forms of life. He sought a new methodology of science which found meaning-making and subjectivity across the biological spectrum, destabilising traditional views that human perceptions encompass the world in its absolute reality.

> All animal subjects, from the simplest to the most complex, are inserted into their environment to the same degree of perfection. The simple animal has a simple environment, the multiform animal has an environment just as richly articulated as it is.[41]

Unlike traditional science which "saw a single world that comprised all living species hierarchically" from the most elementary up to the higher organisms, Uexküll "supposes an infinite variety of perceptual worlds" equally perfect, uncommunicating but "linked together as if in a giant musical score."[42] He unearthed sentience, processes of sign reading and individual perceptivity in each and every organism, finding a purpose and wholeness – a perfection – in all forms of life within their individual *Umwelt.*

[40] Vinciane Despret, *What Would Animals Say If We Asked the Right Questions?* trans. by Brett Buchanan (Minneapolis: University of Minnesota Press, 2012). Frans de Waal, *Are We Smart Enough to Know How Smart Animals Are?* (London: Granta, 2016). Thom van Dooren, *Flight Ways,* (NY: Columbia University Press, 2016).
[41] Uexküll, p.50.
[42] Giovanni Aloi, *Art and Animals,* (London: I.B. Tauris, 2012), p.106.

For Uexküll, an animal's *Umwelt* is its perceptual lifeworld, within which signifying things trigger chains of events. His theory emphasises an organism's self-centred and subjective world, each representing "only a small tranche of all available worlds."[43] Urging us to look from the animal's own standpoint, Uexküll claimed that this was the only way to fully appreciate animal intelligence.[44] He uses images and precise descriptions to try to convey the radical otherness of animal experience to his readers in *A Foray into the Worlds of Animals and Humans: A Picture Book of Invisible Worlds.*[45] He wants us to be able to inhabit animal perspectives and ways of being, embodying them and thinking more like them. He does not anthropocentrically try to adopt an animal perspective, but rather, through a collection of "'meaning' he wanted to rebuild the world as each animal perceives it, to populate this world with all the things that exist for a given animal and to seek for which meaning all these things take for it."[46] However, these worlds remain *invisible* to him and his choice of title emphasises the imagination and improvisation that must occur when encountering the complexity and strangeness of animal life. I read this as an invitation to explore the worlds of animals, to unearth the meanings they find in their environments, but also to identify representations of animals which are not focussed solely on fact and accurate description as in science. Speculative imaginations are necessary to accentuate the inevitable mediations, mistranslations and misrecognitions ongoing when humans and animals meet.

Uexküll's work is echoed and advanced in more recent science, specifically Humberto Maturana and Francisco Varela's theory on *autopoiesis* proposed in 1974.[47] Varela would later go on to publish *The Embodied Mind* with Evan Thompson and Eleanor Rosch in 1991. I expand on these two concepts in later chapters. For now, I simply point out their conclusions about the embodied embeddedness of organisms with(in) their environment. For Varela and Maturana there can be no separation of mind, body and surroundings, destabilising any notions of autonomy – of either the individual (human) subject or of consciousness. However, Varela's later work makes a crucial turn towards cognitive science which I think vital when considering the human relationship to the world. By placing all life upon one continuum in infinite connections, OOO, Vital Materialism and Posthumanism, for example, do not account for the differing degrees of cognition or conscious agency across lifeforms. Nor is the importance of historical and material influence upon the shaping

[43] Waal, p.8.
[44] *Ibid.*, p.28.
[45] For example, comparing images of a village street as seen by a human, seen by a human through a screen, seen by a fly and seen by a mollusc in *Foray,* pp.64 and 65. He uses these images to attempt to demonstrate to his readers what each species responds to and therefore finds important – which signs convey meaning and significance and which do not – and how radically different this is between humans and all other animals.
[46] Vinciane Despret, 'Responding Bodies and Partial Affinities in Human-Animal Worlds' in *Theory, Culture & Society,* 30 (7/8), (2016), pp.51-76, p.56.
[47] This term refers to a system capable of reproducing and maintaining itself, envisioning the closed, self-generating and individuated nature of living systems.

of an entity, its individual embodied knowledge and resultant ways of being considered. In this project, I argue that we must consider our specific histories, both our similarities to and differences from others, and our capacity as a speaking thinking subject as part of the human's situated position. We are animals but we are also different. We live in the world *with* animals but are also responsible *for* them. Our capacity for rationality has ensured this relationship. Our agency must not be disavowed if we are to change our relationship to the world that we share. The challenge now is to find a way to respond *to* them which is not restricted to the relationship of othering enacted across human-animal history.

In her book *Unthought,* N. Katherine Hayles critiques New Materialist thinking and follows Maturana and Varela's propositions. Information for Hayles is "the result of embodied processes emerging from an organism's embeddedness within an environment", this being "constantly in motion" and in "continuous reciprocal causation."[48] For Hayles, meaning is no longer absolute "but evolves in relation to specific contexts in which interpretations are performed by cognitive processes that lead to an outcome relevant to the situation at that moment."[49] This entanglement of different kinds of meaning questions whether reason is central to everyday human action in the world – the limited abilities of consciousness suggest that it is nonconscious cognition, embedded in the material processes of the environment, that enables and guides the majority of our actions, this being shared across human and nonhuman life. World-forming (*à la* Heidegger) is no longer the exclusive ability of the human mind, but a complex system of interactions across different species and modes of intelligence, each influencing others in a continuous cyclical process.

I return to Hayles's work in more detail in chapter four. For now, I restrict this outline to highlight how the artworks discussed in this dissertation reflect this recursivity and mediation between different modes and forms of intelligence, each form embedded in its own world but in constant interaction and meaning-making activities with other life and their surroundings. Feedback loops, collective thinking, distributed cognition, mimesis and uncanny performances of masquerade or speaking animals come to the fore to interrupt beliefs that human consciousness is autonomous or unique. Through my readings of this selection of artworks I demonstrate that meaning cannot be confined to the human and that our lives are in fact intimately entangled with nonhuman life.

[48] N. Katherine Hayles, *Unthought,* (Chicago: University of Chicago Press, 2017), pp.24 and 47. Like Maturana and Varela, Hayles emphasises "that there is no consciousness without re-representation, representation is clearly a major function of the proto-self, site of the cognitive nonconscious and the processes that feed forward information to core and higher consciousness" pp.47-8.
[49] *Ibid*., p.26.

Allure and Alienation

Drawing upon French psychoanalyst Jacques Lacan's 'The Mirror Stage as Formative of the *I* Function' (delivered on July 17th, 1949), this dissertation develops the concepts of *allure* and *alienation* in a two-fold manner.[50] In Lacan's analysis, the human child in front of the mirror jubilantly identifies with and assumes his own reflection, fixing it in his mind (in contrast to the chimpanzee who quickly realises the vacuity of the image and loses interest). He is captivated, *allured* by his reflection. "Still trapped in his motor impotence and nursling dependence" the human child experiences a "discordance [between] his own reality" of incoordination and the (apparently) coordinated body of the reflection.[51] This contrast is first experienced as rivalry; the wholeness of the image threatens the child with fragmentation. Yet this tension is resolved as the subject identifies himself with the image, leading to the formation of the ego.

In Lacan's analysis, the formation of the ego and thus the subject of the human child depends upon one's *false* identification with a counterpart. It demonstrates a moment of "*spatial capture*" of the child by the specular image, who narcissistically assumes the image as his own self in an imaginary moment of mastery. The "subject anticipates the maturation of his power in a mirage" exterior to him, this being "more constitutive than constituted."[52] What 'The Mirror Stage' draws our attention to is how the human ego and subject is formed through a narcissistic misrecognition (*méconnaissance*), *allured* and fascinated by an exterior specular space which will forever *alienate* the subject from himself. The infant is introduced into the imaginary order; the realm of language, proper names, the law and kinship relations which "*sustain* the integrity of the body."[53]

The subject's integral body is not constituted by a natural boundary, but by "the law of kinship that works through the name" argues Judith Butler. However, as the gender theorist, referencing Slavoj Žižek explains, "*proper names* [..] do not, strictly speaking, describe any given content or objective correlative, but act as rigid designators that institute and maintain the social phenomena to which they appear to refer." Names such as 'woman' and 'man', or 'human' and 'animal', do not describe some kind of innate reality but rather act as political signifiers "by instituting and sustaining a set of connections *as* a political reality."[54] Butler's reading of Lacan destabilises anthropocentric ideals about the autonomous and self-constituted human subject with a predefined self in opposition to the animal. Her argument suggests that no identity is innate and is,

[50] Jacques Lacan, 'The Mirror Stage as Formative of the *I* Function as Revealed in Psychoanalytic Experience', in *Écrits,* trans. by Bruce Fink, (London: W.W. Norton & Company, 2006), pp.74-81.
[51] *Ibid.*, p.76.
[52] *Ibid.*
[53] Judith Butler, *Bodies That Matter,* (London: Routledge, 2011), p.41.
[54] *Ibid.*, p.158.

in fact, only constituted by an external signifier. Butler highlights how the human use of names plays a crucial role in constructing and delimiting identities and social realities.

I follow Butler's argument to suggest that through the "spatial capture" of Lacan's human subject within 'The Mirror Stage' and subsequent entry into the imaginary realm, the subject becomes trapped in the world of language. In this world, no "signifier can be radically representative" but is instead "a site of *méconnaissance*" producing the expectation of "a unity and a full final recognition [of the world] that can never be achieved."[55] Humans, following 'The Mirror Stage', erroneously identify themselves and external objects with names and words, denoting them a false unity and knowability, a false understanding of the world which self-servingly lends them the experience of autonomy and all-knowing that confirms anthropocentric principles.

Humans see the world with a narcissistic gaze which forever reflects back to them their own projections and beliefs that the world can be captured by these projections. In fact, through both 'The Mirror Stage' and the construction of language, human subjects are *allured,* captivated by the spaces of objects and beings external to them, and in efforts to consolidate these externalities with their own sense of identity, erroneously name and label others. They are *alienated* from both themselves and their surroundings through the language they use which contradictorily reinforces their phantasm of control through its false identification with external objects.

Animals, for Lacan, cannot make a symbol stand for a thing as they are incapable of the operation of erasure and substitution, the inherent duplicity of speech.[56] Unlike man, animals do not deceive themselves in this way, but as Kelly Oliver, following Derrida's deconstructive philosophy points out, it is "man" who is the "self-deceptive animal."[57] According to deconstruction, signs are only ever in relationships of *différance* with their signifiers, constituting an endless deferral and delay of meaning.[58] In this sense, words do not enable humans to grasp the world in its entirety or gain access to the originary meaning of other beings. Rather, the human subject remains forever *alienated* from the world, trapped in an *alluring space* of deferral and misrecognition. This dissertation unpacks this paradox.

[55] *Ibid.*, pp.142-3.
[56] See Jacques Lacan, *Écrits,* (1966) where Lacan writes "[b]ut an animal does not feign feigning. He does not make tracks whose deception would consist of having them taken as false, being true ones, that is to say those which would lead to a successful tracking. No more does he erase his tracks which already would be to make himself the subject of a signifier." Quoted in Jacques Derrida, 'And Say the Animal Responded?' in *The Animal That Therefore I Am,* trans. by David Wills, ed. by Marie-Louise Mallet (NY: Fordham University Press, 2008) pp.119-140, p.129-30 and n.13.
[57] Oliver, p.186.
[58] Derrida's neologism *différance* combines the verbs to differ and to defer, thus positing relationships of difference as endless deferral of meanings rather than binary opposition. See Jacques Derrida, *Of Grammatology,* trans. by Gayatri Spivak, (Baltimore: John Hopkins University Press, 2016).

My Non-Objectivity

Surrealism traditionally has sought to decentralise human perception and discover new meaning through creative expression. Envisaging animal hybrids, dream-like landscapes and uncanny chimeras, this group of artists were interested in accessing the unconscious worlds of possibility, the imagination and the irrational. Through their experiments with automatic writing, they questioned the hold of language as rational communication and attempted translations of animal and insect voices in their work.[59] Looking to overturn common sense, Surrealism sought to break the boundaries of human language and find meanings underlying the violent names applied to the world. They attempted to adopt the perspective of others and so these artists paved the ground for a new kind of reading or communication that was not rooted in the mind nor words, but in the bodily gestures and movements in which all life takes part. Surrealists moved beyond language to access the previously unnameable, invisible and thus unthinkable worlds and concepts beyond it.

The artists explored in this thesis, although not all traditionally grouped with Surrealism, invite viewers to think non-linearly, and non-hierarchically, in atypical worlds where human meaning is usurped.[60] These are spaces existing beyond language and human knowledge frames, engaging with biosemiosis and the unreadable gestures of animal life and communication. The frames of the artworks remind us of the limits of human representation and understanding. They draw attention to the constant mediation underway when we look at animals, instead of falsely emphasising an objective gaze as in certain scientific study. These are spaces which although encased by human methods and practice, challenge this encasing by hinting at curious sights, sounds and meanings not quite understandable. Not able to be put into words, these meanings reach beyond the encounters, challenging our conceptions of ourselves as all-knowing subjects, and how we see nature and the rest of that world. The tension within Lacan's human subject as both allured by his surroundings and alienated from himself is reconfigured as we encounter these worlds where language fails us, and our misrecognitions are made clear. For me, it is this re-focus on what happens beyond human limits that is the most successful if we want to learn to appreciate animals on their own terms and escape our violent and erroneous methods of categorisation.

[59] Max Ernst had an avian alter-ego named "Loplop", Salvador Dali's work (amongst other artists) is full of animal imagery and Leonora Carrington's books express environmental concerns for animal life premature of the rise of Environmentalism in the 1970s.

[60] Painlevé and Caillois were both affiliated with André Breton's Surrealism in the first half of the twentieth century, but later distanced themselves from him as a result of conflicts about their ideas.

Animals often occupy the world of the uncanny in human eyes, vaguely familiar but not quite right, suggesting at something repressed, lurking in the heart(h) of the home.[61] For Sherryl Vint, the uncanny expresses "a limitation of human perception" and she reminds us that "those [who are] rooted in what *is,* cannot conceptualise what *might be.*"[62] Uncanny readings of others reveal the narcissism of the human gaze, unable to see anything but oneself reflected in the lives and situations of others. Through our idealisation or repulsion of animals as we search for and read ourselves in them and their behaviours, they become increasingly distanced from being truly understood or having a meaning of their own. Their expressions are over-determined with human meaning in attempts to diminish their threat and make them more understandable to us. Yet these narcissistic labels, which erroneously posit humanity as the measure of all things, need to be rewritten.

The artists I have chosen all depict animals in their own worlds as beings sensuously and sensibly responding to their environment in ways unimaginable for humans. Each emphasises the radical otherness of animals, their unique and at times eerie abilities, which evade human understanding. The works deliberately retain uncanny tones in their animal representations. I argue that their obvious and artificial framing of animals is most effective if we wish to learn to appreciate animals on their own terms and identify and escape our own narcissistic tendencies. What we must come to recognise is that no representation of animals can ever be free from human projections. Through creative methods and explorations of art, science, theory and technology, the chosen artworks replicate this tension and successfully make visible the lines of human limits. As a species who know the world primarily through our eyes – translating sights into sounds with our capacity for naming through language – the tactile, mimetic and collective worlds of spiders, octopuses and bees – in perfect attunement with their surroundings – are impossible for us to translate. It is this untranslatability that is of most importance here. Animals are typically seen as mirrors for human behaviour, experimented upon in labs for proof of (the absence of) human values, and labelled inferior to humans because of this very 'lack'.[63] When animal worlds cannot be explained via human constructions, these modes of distinction are proven untenable.[64]

[61] Sigmund Freud, 'The Uncanny' in *The Uncanny*, trans. by David McLintock, (London: Penguin Books, 2003), pp.121-162.
[62] Sherryl Vint, 'Science Fiction' in Turner *et.al.* pp.488-503, p.497.
[63] See Despret, *What Would Animals Say* for an entertaining discussion of this.
[64] Haraway's proposition "Artefactualism" – which emphasises the co-creation of nature by humans and nonhumans – recognises an agency within nature and animals, without personifying them into a mirror of human actions. See Donna J. Haraway, 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial perspective, in Haraway, *Simians,* pp.183-201, and also Stacey Alaimo, 'Cyborg and Ecofeminist Interventions: Challenges for an Environmentalist Feminism' in *Feminist Studies,* Vol.20, No.1, (Spring 1994), pp.133-152, pp.145-6.

Scientific study, with its emphasis on pure objectivity, often remains clouded with human meaning, reflecting hierarchical structures and human determinations in its presentation of animals. One of the leading thinkers on the animal question, Donna Haraway, presents a feminist argument for this case and the non-innocence of words in her 1990 collection of essays *Simians, Cyborgs and Women.* Haraway rejects "ideological claims for pure objectivity rooted in a subject-object split that has legitimated our domination of nature and ourselves" and proposes we transform both the foundations of our lives and the natural sciences so as "to underpin new relations with the world."[65] Haraway sees the formal theory of nature to have "been stylistically constituted in terms of the capitalist machine and market" so that now it serves only as a mirror within which we look for ourselves.[66] Her critique lies with the patriarchal structure of human society and its "maze of dualisms" that employ nature as a confirmation of this system.[67] The natural world is either reflected to endorse patriarchal ideas about gender, sexuality and hierarchy or presented as the savage other, an animal past out of which humans have managed to elevate themselves by moving up into culture.

The work of Haraway, as a feminist, biologist and Animal Studies scholar, runs as a constant thread provoking my own thought in this project. She is keen to escape traditional scientific objectivity and empirical thinking and instead emphasises the need for "*situated knowledges*" made up of "partial perspective[s]" which, rather than totalising and universalising all meanings under one objective umbrella, insists on "irreducible difference and radical multiplicity of local knowledges."[68] I apply Haraway's theories to my own work, exploring a range of perspectives and non-traditional partnerships when encountering the animals and artworks within this dissertation. This allows fragmented histories to sit together in monstrous chimerical forms like the cyborg narratives – human/animal/machine hybrids – Haraway demands.[69] Nature and culture are reworked and re-entangled to reinforce the fact that we have all co-evolved together.

These cyborgian, hybrid bodies resist any absolute, totalising or identificatory lens and instead revel in "the impure, the imperfect, the rupture, the different."[70] Haraway's thought in the 1980s and 90s proposed a new form of "feminist objectivity" and refused to assent to any kind of "anthropomorphic species-hierarchy."[71] Haraway instead sought to invent a new discourse for modern life where boundaries are disturbed, identities are hybridised, familial narratives are escaped and all stories find their place. These narratives remain partial, open to contingency and so indeterminate, disturbing and ambiguous. This dangerous and subversive approach is something I

[65] Haraway, *Simians,* p.19.
[66] *Ibid.,* pp.59 and 21.
[67] *Ibid.*, p.181.
[68] *Ibid*., pp.188, 190 and 187.
[69] See Haraway's 'Cyborg Manifesto' in *Simians*.
[70] Arthur Kroker, *Bodydrift: Butler, Hayles, Haraway* (Minneapolis: University of Minnesota Press, 2012), p.118.
[71] *Ibid.*, p.125.

have mirrored in my own project. I explore artworks through multiple perspectives and viewpoints, allowing relations between them (and the species they represent) to emerge out of contingency. I have incorporated into my writing a range of approaches so as to undermine the threat of totalising assertions or a universal, objective viewpoint. This research remains dangerously speculative, interrupting dominant claims with ambiguity and contingency.

Rethinking Limits

Critical Animal Studies as a theoretical discipline follows Jacques Derrida's propositions for a radical rethink of the "always co-constituting limits of 'the human' and 'the animal'" and has been applied rigorously by scholars including Lynn Turner and Matthew Calarco.[72] Derrida's words stand as a steady axis in the development of my own ideas. The philosopher interrogates the positioning of animals as pure negativity in his 1997 address at Cerisy, *The Animal That Therefore I Am.* He interrogates philosophical thought which violently places all animals within the concept of 'the animal' based upon a certain 'lack', undermining beliefs humans hold about what animals supposedly cannot do. At the same time, he condemns the violent "corralling" of all animal species within the name "the animal", and calls for a recognition of the multiplicity of differences that can be found within animal worlds.[73] Derrida applies a methodology of *limitrophy* to his thinking, which seeks to explode, feed, complicate and curdle the limit between 'the human' and 'the animal'.[74] He demonstrates how only on the basis of asserting a distinction between animals and humans can either binary be established. The concepts 'human' and 'animal' *depend* on their very distinction from one another in order to be upheld.

By exploding the limit between the two concepts, Derrida not only undermines the possibility of each but opens up the possibility for heterogeneity on both sides. Derrida's thought therefore reaches beyond that of the human/animal divide and into human identity politics – concerned for example with sexuality, gender and race.[75] Derrida's work is not preoccupied with awarding animals human rights, he himself was not even a vegetarian.[76] Rather, he successfully

[72] Rick Elmore, 'Biopolitics' in Turner *et. al.,* pp. 80-93, p.85.
[73] Derrida, *The Animal,* p.32. This text was originally delivered as a ten-hour address at the Cerisy conference, France, 1997, entitled "The Autobiographical Animal," the third of four such colloquia on his work. The book was assembled posthumously on the basis of two published sections, one written and recorded sessions, and one informal session.
[74] *Ibid.,* p.29
[75] I explore this specifically in 'Prelude: A Silkworm of One's Own', but the urgency of this extension is not lost across the rest of the work which remains concerned with decolonisation.
[76] See Jean-Luc Nancy, '"Eating Well" or the Calculation of the Subject: An Interview with Jacques Derrida' in *Who Comes After the Subject?* ed. by Eduardo Cadava, Peter Connor and Jean-Luc Nancy, (NY: Routledge, 1991). I concur, the issue is not about awarding human rights to animals, extending the limits of the ethical

shows how "anthropocentrism is an interlocking series of thoughts and practices that revolve around a sharp human/animal binary, a division that ultimately functions to decrease the multiplicity and radical alterity of animals to a single shared essence."[77] Derrida troubles the limit separating humans from animals and his argument imagines a relation to animals which acknowledges and embraces differences and calls for ethical responsibility to what has typically been named the other.

Giorgio Agamben follows a supposedly similar path to Derrida in his 2002 text *The Open.* For the Italian philosopher, *"Homo sapiens,* then, is neither a clearly defined species nor a substance" but rather an *anthropological machine* "constructed of a series of mirrors in which man, looking at himself, sees his own image always already deformed in the features of an ape."[78] However, following contemporary thinkers including Dominic LaCapra, Kelly Oliver, Stephen Morton and Matthew Calarco, amongst others, I find Agamben's analysis to remain anthropocentric. Its primary concern is for the constitution of the human subject opposed to animality, rather than any establishment of animal identity in its own right.[79] Within Agamben's anthropological machine, "the animal" remains "as the constitutive outside to the human itself" thus failing to bring about any form of encounter with "the animal" itself.[80]

In contrast to Agamben's preoccupations with understanding how the animal defines the human, Derrida challenges anthropocentrism genealogically.[81] His thought is valuable for its deconstruction of both 'the human' and 'the animal' – specifically in the philosophies of Levinas, Lacan and Heidegger. Derrida considers the violence and deceptive capabilities of language leading to the erroneous positioning of humans against all animals and its psychoanalytical, ethical and ontological implications. His work has greatly informed my thinking, yet something is lacking. The metaphysical preoccupations within *The Animal* fail to provide me with any specific directive of, or foundations for, how we can envision a change to our relationship to animals and so move forward. This remains the most pressing issue in our current moment. Despite Derrida's calls for "an unheard-of grammar and music", his lack of curiosity for animals themselves leaves something to be desired and his philosophical approach lacks the creativity I think necessary for envisaging nonhuman

and moral spheres, but rather about coming to appreciate animals on their own terms and re-establishing what it means to inhabit a shared world.

[77] Matthew Calarco, 'Genealogies' in Turner *et. al.*, pp.277-292, p.283.

[78] Giorgio Agamben, *The Open,* (Stanford: Stanford University Press, 2002), pp.26-7.

[79] Dominick LaCapra, *History and its Limits*, (London: Cornell University Press, 2009), p.172, Oliver, p.234, Stephen Morton, pp.112, and Matthew Calarco, *Zoographies,* (NY: Columbia University Press, 2008), pp.92-4.

[80] Oliver, p.230.

[81] Historian Rob Boddice's edited collection *Anthropocentrism: Humans, Animals, Environments,* (London: Brill, 2011), presents the history and impacts of this way of being, and our need to (un)learn the worldview that "maintains human (male, white, able-bodied) supremacy" in favour of "ecological alternatives that are socially just and encompass all living things" p.1.

worlds.[82] It is for this reason that my analysis of art is a unique and rigorous contribution to Critical Animal Studies.

The artists selected for my project explore new ways of looking at or representing animals. They work with animals, as well as cultural constructions including language, technology and science, mediating between human and nonhuman worlds to emphasise the collaboration ongoing between these typically opposed realms. Their works, at the same time, make clear that human understanding cannot be absolute. The artists give a frame and a voice to the gestures, processes and calls of other animals, creating a space where forms of communication and meaning outside of humanity's own come to the fore. Processes such as mimesis, typically seen as a utilitarian function, evolves into a mode of self-expression and desire for animals such as the octopus and praying mantis of Painlevé and Caillois. Allora and Calzadilla's ventriloquism in *The Great Silence* enables an endangered species to tell us a moralising tale about extinction. This opens up our consideration for what animals themselves might think about the human presence on Earth, and wonders whether we really do in fact deserve to survive.[83] Huyghe's methods of interspecies translations in his complex installations make prevalent our narcissistic readings of the world alongside the paradox of translation as an impossible obligation. Each of the artists allure us into the worlds of other species, only to remind us that our condition is one of insurmountable alienation. The limits to our ways of seeing, hearing, reading and interpreting always prevent any more than a "surface encounter" with other species.[84] As they delve into these worlds, irrationalities unfold which morph our understandings of what can be.

A Note on Ethics

I cannot overlook that despite their positive intentions of making animal worlds available to their human audiences, issues remain around the ethicality of artists using animals within their practice. As we learn in chapter one, Painlevé's scientific approach meant many of his animal subjects were contained in artificial habitats and subjected to dissection procedures. Tomás Saraceno claims to "work with" spiders yet another reading might consider his practice an exploitation of spider activities and their materials. Pierre Huyghe has met with criticism concerning his use of animals in his artworks (see note seven of this introduction) and his work *After Alife Ahead* had to directly deal with the fact that the albino chimera peacocks originally included in the

[82] Derrida, *The Animal,* p.64. In *When Species Meet,* Haraway critiques Derrida for failing "a simple obligation of companion species: he did not become curious about what the cat might actually be doing, feeling, thinking, or perhaps making available to him looking back at him that morning" p.20.
[83] See Colebrook, *Posthuman,* p.22.
[84] Ron Broglio, *Surface Encounters,* (Minneapolis: University of Minnesota Press, 2011).

installation did not respond well to the artificial habitat he placed them in and had to be removed (this was confirmed to me by an assistant during my visit).

Critics argue that artists exploit animals through their inclusion of them in their practice. They rightly point out that despite the best efforts of artists, these animals cannot agree to participation in the artistic process and certainly do not reap the financial or celebrity benefits that the artists themselves do in the production and exhibition of these works. In addition, many argue that through the inclusion of animals in artistic practice, the inherent value of these animals – on their own terms and in their own rights – is effaced. I acknowledge these difficulties and ask my readers to do the same. However, for the purpose of this dissertation, I maintain that these specific exhibitions of animals allow viewers to gain a (non)understanding of animal worlds which might spark inspiration for alternative ways of relating to otherness. This is the most critical issue for me and this research, firmly located in our current moment of ecological breakdown.

Tentacularity

The collection of essays in this thesis make their own *Foray into the* individual and *invisible worlds of animal*s, as represented by certain artists, inspired by Jakob von Uexküll's writings. These essays do not aim for a comprehensive discussion of the biological facts of animality nor a technical investigation of artistic practice. Rather these are spaces of writing that weave together imaginative speculations with an array of biological, artistic, theoretical and critical material. My style of writing therefore explores animal worlds in an original and previously unimagined way.

I have been inspired by the writings of Aaron Moe in his chapter 'Poetics' which attempts its own metamorphosis of language and essay writing as well as Nicole Anderson's chapter 'Ethics' (both published in Lynn Turner, Undine Sellbach and Ron Broglio's *The Edinburgh Companion to Animal Studies*) which beautifully complements an academic argument about the human-animal relationship with her own personal encounter with a wild possum in her home in New South Wales.[85] Peggy Kamuf's chapter 'Your Worm' and Nicholas Royle's 'Mole' (both in Turner's *The Animal Question in Deconstruction*) also experiment with the human-animal encounter, allowing the bodies of animals to inform their thinking and writing.[86] I too am fascinated by the bodies of animals and how these bodies can inform both my thinking and writing processes. My writing is porous and tentacular like an octopus, thought extending across and beyond chapters like the thread of a spider's web with my arguments metamorphosing as a silk/worm does to uncannily destabilise any

[85] Aaron Moe 'Poetics' and Nicole Anderson, 'Ethics', in Turner *et.al.,* pp.397-412, pp.140-159.
[86] Peggy Kamuf, 'Your Worm' and Nicholas Royle, 'Mole' in Turner, *The Animal Question,* pp.158-176 and pp.177-191.

dominant narrative or all-encompassing claim. The tentacular methodology of this dissertation therefore structurally reflects its thesis about the impossibility of the human-animal encounter, or at least as we know or expect it to be.

Despite the differences in period, approach and content of the artistic practices investigated in this dissertation, the connections I make between these artworks and theories can be discerned throughout my writing. These artworks are all spaces where curiosity for otherness is developed and human meaning is (at least temporarily) interrupted by webs of entanglement without hierarchy or centre. The theories applied all aim at a certain decolonisation of thought and the necessity to acknowledge a multitude of narratives and histories when interpreting information. For this reason, I have applied a tentacular structure to the form of the dissertation as a whole, a methodology adapted from my reading of Donna Haraway. "Tentacle" comes from the Latin *tentaculum,* meaning "feeler," with *tentare* meaning "to feel" and "to try". [87] Haraway looks to the embodied, webby, tentacular worlds of spiders and octopuses "to tell the story of [her] Chthulucene." These "mobile, many-armed predators, pulsating through and over the coral reefs" are apt representations for its "themes of ongoing looping, becoming-with and ongoing polymorphism."[88] For Haraway, "tentacularity is about life lived along lines – and such a wealth of lines – not at points, not in spheres."[89] This is a vision of entanglement, sympoiesis[90] and multiple contact zones of thinking-with and muddling through translations.[91] She looks to these ambiguous and cryptic predators, ever-changing and deceptive through their inky and viscous secretions, to emphasise how her *Chthulucene* is about both living and dying, critters living together in tension, contingency *and* co-production. In Haraway's vision "flourishing will be cultivated as a multi-species response-ability."[92]

Like Haraway, I too tell the stories of predatory spiders and octopuses. Their multi-limbed bodies physically and psychically allure and alienate human constructions based on hierarchy and logic. These animals provide models for my own thinking and writing to imitate. The structure of this dissertation is lived along entangled lines of interconnection. My chapters do not follow rigid structures nor theses but are rather porous, full of infinite connections and holes leaking into the frames of one another. I weave in an additional thread to cohere together the work as a whole. A prelude, interlude and coda interject and connect the longer chapters, bringing together key themes

[87] Donna J. Haraway, 'Tentacular Thinking: Anthropocene, Capitalocene, Chthulucene', *e-Flux,* Journal #75, (September 2016), available: https://www.e-flux.com/journal/75/67125/tentacular-thinking-anthropocene-capitalocene-chthulucene/, [accessed 30 October 2019].
[88] *Ibid.*
[89] Haraway, *Trouble*, p.32.
[90] Collectively producing systems that do not have defined spatial or temporal boundaries, evolutionary systems with the potential for surprising change.
[91] Haraway, *Trouble*, p.33.
[92] Haraway, 'Tentacular'.

of encountering and extending hospitality towards otherness. I apply these musical titles to reflect Uexküll's ideas that all of life is composed together in nature as in a musical score.[93] Within my writing, themes overlap, and arguments reappear in fragments like the body of the octopus. I cross-pollinate all manners of thinking and move across the spaces of the artworks identifying opportunities for the fertilisation of new ideas and readings. I am not arguing for a closed-off conclusion that art achieves this or animals show that. Rather my thesis is about ambiguity, speculation and possibility emerging in-between whilst tentatively feeling with loopy tendrils across the time and space of my writing.

The chapters have mostly been written independently, for the purpose of conferences and publications. For this reason, they were allowed to assume a discursive form and meandering structure with more elusive arguments than a typical PhD might comprise. These chapters are able to stand alone as individual reflections and speculations on artworks, theories and science. Yet, the porous nature of my ideas, the overflow of my thinking from one to another, and my ability to make infinite links and connections between works, words and worlds, allows these disparate sections to be brought together into one entity.

The 'Prelude', 'Interlude' and 'Coda', all originally thought pieces for conferences and an online blog, have been strategically placed between the longer theoretical discussions to act as intermissions, spaces for contemplation and reflection on hospitality and what it means to encounter the animal in an artwork. How does this encounter differ from a typical scientific investigation or a habitual interaction in the world? These sections allowed me space to experiment with my own creative critical writing, reflecting the ambiguity and uncertainty humans and our knowledge forms meet when we delve into animal worlds.

I have retained the integrity of the original structure of each chapter for this thesis, which is why each one stands as a story in its own right. Chapter three emerged as a journal article, chapter one as a voiceover to Painleve's films, chapter four as an online publication and chapter five as part of an exhibition addressing Rational Inhumanism. Their arguments formulated independently, these essays come together as one larger piece of writing to reflect my opinion that animal worlds cannot be contained by human ways of knowing and rather a multiplicity of perspectives is necessary to reflect the radical unknowability of animals. The chapters are woven together by my tentacular methodology, arguments interconnecting between and across my writing. These essays remain unfinished, speculative and full of questions to reflect my position that animal worlds are unknowable on human terms. I have contained the majority of the science and factual information within the footnotes, which act as a support to the theoretical discussions in the main body of the

[93] See Uexküll.

text. I invite my readers to dip in and out of the material presented here. I am not claiming to present one truth or conclusion and do not prescribe a certain path to adopt or conclusion to reach, but rather hope that my readers encounter these animals and their artists on *their own terms*.

Through my careful choice of artworks and my refusal to return to anthropocentric readings of these works, these individual essays coalesce into a dangerous composition in its own right which itself unearths the most radical possibilities when we follow tentacles we normally choose to ignore. The multiplicity of my thesis I hope reflects my larger concerns – for the respect of the multitude of differences in our contemporary world. Differences do not always fit together in harmony. Sometimes tensions arise. But that is all part of the allure and alienation of living in a multi-species world.

Language: My Impossible Responsibility

Due to the sensitivity of words I have highlighted so far, the application of language within this dissertation is done cautiously and here I must clarify some of my choices. I use 'human' as a collective noun for the species *Homo sapiens.* This being opposed to the collective noun 'nonhuman' which encompasses all other species, living and not. However, as with terms such as 'man', 'woman', 'humanity', 'the subject/self', 'nature', 'culture' and 'intelligence', these labels are grossly homogenising and reflect only one interpretation of the terms (typically a Western reading, but once again I homogenise here). Similarly, personal pronouns such as 'we', 'us', 'them' and 'they' standardise interpretation without full consideration for what is contained by these words. As Haraway writes, "language is not innocent".[94] I use these terms out of necessity but firmly acknowledge that these labels inaccurately reflect a collective status. 'Human' does not distinguish in terms of race, gender, sexuality, political concerns or economic status. Neither does 'nonhuman' reflect the diversity of species, types, genders and sexualities that abound in the nonhuman world. I therefore ask my readers to recognise my difficulty and inherent tie to language and human words. When I use these terms, it is in interrogation rather than compliance with their historically anthropocentric meanings, such as 'the human' as a white, able-bodied, heterosexual male.[95] *I* am not homogenising but rather emphasising the risks inherent to language of this very trait and drawing attention to the violences incurred when these terms are taken literally. Language in this thesis is my own impossible responsibility.[96]

[94] See p.13 of this introduction.
[95] As figured in Leonardo DaVinci's *Vitruvian Man.*
[96] See Jacques Derrida's notion of "hyperbolic ethics" developed in, for example, *Of Hospitality* and 'Eating Well'.

Our current crisis is widely known as "the Anthropocene". This word proposes the entry into a new geological epoch where human activity has become a planetary force. Impacts will be read in the atmosphere and geology of the globe for millennia to come. But this also remains a difficult term for me. Homogenising *Anthropos* as one force, "the Anthropocene" posits *all* humans as equally to blame for ecological collapse.[97] This is not the case, and further complicating the issue is the fact that despite how nearly all of the damage has been inflicted by countries of the Northern Hemisphere, many of the most serious impacts of human action are falling upon countries of the Southern Hemisphere. I do not wish to deny the fact that we are entering a new geological epoch brought about by the actions of humans, but these umbrella terms are not helpful in our social climate.

The human subject is typically equated with consciousness, universal rationality, and self-negating ethical behaviour, with otherness positioned as its negative or specular counterpart.[98] This dissertation erodes notions of human subjectivity from two angles. First, undermining rationality's definition as the source of universal meaning, when processes such as mimesis, parroting and metamorphosis unearth alternative expressions of self totally *unrational* and therefore beyond human understanding. Secondly, by suggesting animals be judged on their own terms rather than on ours. Rationality as a term holds no ground if we understand words as narcissistic projections and misrecognitions, only ever in relation to what they are not. I deconstruct language as the defining feature of human subjectivity in order to emphasise how language inevitably controls our thoughts and everything around us, serving to restrict rather than enrich what we know about the world. Through our arrogant belief that language marks us out as superior and all-knowing about the world in which we live, it is paradoxically this very ability which delimits what and how we can know the world. Perhaps humans should begin to consider other ways of thinking, being and communicating which do not depend on language.

My text is dotted with a smattering of hybrid words such as "consump/mation" or "silk/worm" which I have included so as to emphasise the slippage across meanings and to erode language in my own way from within. I have also made use of unorthodox words such as

[97] Social theorists Jason W. Moore and Donna Haraway have instead suggested "Capitalocene" and "Plantationocene" respectively, in order to pinpoint a specific moment in certain *Anthropos'* history which initiated the severity of human impact on the planet. See Jason W. Moore, *Capitalism in the Web of Life,* (London: Verso, 2015), and Donna J. Haraway, 'Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making Kin' in *Environmental Humanities,* vol.6 (2015), pp.159-165, p.160. Nicholas Mirzeoff identifies an even more specific and condemnatory "White Supremacy Scene" in his chapter 'It's Not the Anthropocene, It's the White Supremacy Scene; or, The Geological Color Line' in *After Extinction* ed. by Richard Grusin, (Minneapolis: University of Minnesota Press, 2018), pp.123-149. Haraway has also coined "Chthulucene" to emphasise what must be done now, and how to look forward in order to "stay with the trouble" of the problems that have been wrought. See *Staying with the Trouble.*

[98] Rosi Braidotti, *The Posthuman,* (Cambridge: Polity Press, 2013), p.15.

"unrationality" and "knowledges" to emphasise how animals (and humans) cannot be contained by the words humans apply to the world and that we need to look beyond the limits currently in place. The interconnections of text and image in my work is also of great importance. I illustrate my chapters to provide an alternative lens for animal subjects – one not confined to the laws of language – in the hope that these images will express what my words cannot. I usurp anthropocentric ideals about human subjectivity, bringing animal subjectivities definitively into the space. I unveil animal modes of being and organisation which draw in the human gaze and curiosity whilst radically challenging some of the stories that humans tell ourselves about the world.

I consider Derrida's paradox of the impossible necessity of infinite hospitality for an unknowable other, where he plays upon the fluidity between *host* and *hostage* which both come from the same etymological root.[99] More recently, Xenofeminism urges us to welcome the unknown, to "seize alienation as an impetus to generate new worlds." Knowledges previously othered and dismissed by language and empirical science must be set free and enabled to "trap" and "interrupt" knowledge structures so that we can move into a future where all identities, perspectives and modes of action can establish themselves.[100] Scales, speeds, temporalities and spatialities, might clash. However, it is only by recognising the imposition of our frames of reference, acknowledging that the rest of the world cannot be accommodated by them, that we might begin to expand our perceptual fields whilst recognising the very limits of them.

The artists in this project provide frames to animal worlds. Yet in their very artificiality, these frames create spaces for animals to be interesting on their own terms and to express attributes and behaviours normally only seen from an objective standpoint. Co-authors in the artworks, these animals become agents in their own right and my writing duly accommodates this subjectivity. The goal is not to suggest we must model our behaviour on animals, but to instead consider how their ways of being might help us detoxify certain human ideologies about selfhood, animal life, the world and the limited perceptual fields we occupy. Language and reason are undermined by the unrational and creative worlds of animals in surreal artworks.

The triadic methodology of this dissertation creates a unique perspective for exploring the three fields of art, science and theory which to me seems to be the most effective lens to use. As our contemporary life is becoming increasingly responsible for the natural world that we increasingly deny a response, it is urgent that new modes of relating to nonhuman others evolve. As Haraway writes in *When Species Meet,* "response-ability" is the way forward if all life is to flourish.[101] We

[99] See Derrida and Dufourmantelle's discussion in *Of Hospitality.*.
[100] Laboria Cuboniks, 'Xenofeminism: A Politics for Alienation', *XF Manifesto,* (n.d.), available: https://www.laboriacuboniks.net/, [accessed 4 September 2019].
[101] Haraway, *Species,* p.28.

must hold all life *in regard, looking back* so as to respond to others with respect and hold ourselves accountable for our actions towards other beings.[102] Crucially, however, this is not about the idealistic preservation of all life, but both killing and nurturing, living and dying, presence and absence, "and remembering who lives and who dies and how in the string figures of naturalcultural history."[103] I do not sensationalise animals as better than humans – they appear as ruthless predators at times across these chapters. However, it is only when we begin to pay attention to the value of others, respecting their (at times terrifying) differences from us, that any appreciation beyond anthropocentric principles that animals exist only for/against us can be reached.

Chapter Outline

I open this dissertation with an exploration of the work of biologist and documentary filmmaker Jean Painlevé. I look briefly at his sexually subversive films *Acéra ou Le bal des sorcières* [*Acera or The Witches' Dance*] (1972) and *L'Hippocampe* [*The Seahorse*] (1934) before carrying out an extensive reading of the more recent *Les Amours de la pieuvre* [*The Love Life of the Octopus*] (1967) made with Geneviève Hamon. This octopus sets the stage for the tentacular composition of the dissertation. Part of this chapter was originally written for a conference I co-organised in 2017 called *INTIMATERIAL,* and so retains traces of thought about sexuality, intimacy and materiality. It now re-focusses its investigation on why the overt mediation of Painlevé and Hamon's production is the most successful method for representing to humans the radical, tentacular and watery world of the octopus. I am fascinated by the body of this animal, gesticulating in a language without words that humans cannot understand. With their cognition and consciousness spread over eight sensuous arms, it becomes impossible for us to ever really see from an octopus perspective. However, returning to Lacan's 'Mirror Stage', I identify an alienating psychological past that might explain the allure of this slippery cephalopod.

My second chapter turns to Roger Caillois's writings on mimicry and the sexually carnivorous praying mantis (two traits also observed in octopuses). Both Caillois and Painlevé were associated with Surrealism and accordingly investigate the weird and wonderful worlds of animals through a non-utilitarian lens. In contrast to scientific objectivity prevalent in animal representations and investigations, Caillois and Painlevé emphasise how animals inhabit worlds and ways of life radically

[102] Haraway asks her readers to "consider 'regard' and 'respect' a bit longer" – *respecere* and *respectus* – in order to notice the implicit notions of looking back *with* respect. There is "a specific relationality" within these verbs. Looking back at another means to see differently, to hold in regard, to be touched by another's regard and to take care of. She also highlights the "oxymoron inherent in 'species' – always both logical type and relentlessly particular, always tied to *specere* and yearning/looking toward *respecere." Species*, p.164.
[103] Haraway, *Trouble*, p.28.

different from that of humans, and their work highlights how much we over-determine animal worlds with our own meanings. I use Caillois's ideas as a jumping off point to explore the dangerous alliance of women and insects – specifically during coitus – an alliance that patriarchal structures blind us to, but that might in fact be the most threatening. I analyse one component of Pierre Huyghe's *Untilled* (2011), a female/bee/hive hybrid, to subvert the typically negative association of women and insects and instead assign it an erotic and devouring agency of its own.

A silky strand – 'Prelude: Unravelling the Secretions of the Silkworm' – threads together chapters two and three. This was originally written for a conference I co-organised called *Silk Unravelled* in 2017.[104] I trace the artificial lives of these worm/insects who are now bred in farms and dependent upon captivity for survival. This is visualised and narrated in artist Kumi Oda's short film *Circle of Silk* (2017). I consider silk/worms and their material produce as colonial commodities in relation to Candice Lin's *The Worm Husband (Our Father)* (2016). I then embark on a more personal encounter with the body of the insect shown in Oda's film. Echoing Derrida's 'A Silkworm of One's Own' my short essay considers the infinite hospitality of this tiny form and the ways in which the gender ambiguous silkworm might reconfigure our understandings of subjectivity and sexuality.[105] Silk/worms demonstrate extended cognition and I thread my thinking on this ability across the first few chapters into a maze of spider/webs. Argentinian artist Tomás Saraceno composes cosmological exhibitions with the silk of spiders. Chapter three was written for publication in *Antennae,* the Journal of Nature and Visual Culture, and concentrates on the interface of art and science. I ask what can be generated at this limit between two diverse disciplines?[106] Saraceno invites us into the world of another species, asking us to hear and sense as if we were spiders ourselves, and applies his discoveries about spiders to technological innovations that could radicalise human ways of living. The sensitive attunement of spider/webs to their environment creates a model from which we might learn as we increasingly detach ourselves from the (natural) world in which we live. As aesthetic objects in themselves, I explore the power of Saraceno's hybrid webs as examples of cross-species collaboration and interdisciplinary architectures that transport viewers into more-than-human worlds.

Chapter four of this project is dedicated to an exploration of Pierre Huyghe's revolutionary practice, analysing and theorising about three of his large scale installations – *Untilled, After Alife*

[104] It was also later published Elizabeth Atkinson, 'Unravelling the secretions of the silkworm' in *JAWS: Journal of Art Writing by Students*, vol.5, no.1, (2019), pp.93-105.
[105] Jacques Derrida, 'A Silkworm of One's Own' in Hélène Cixous and Jacques Derrida, *Veils,* trans. by Geoffrey Bennington, (Stanford: Stanford University Press, 2001), pp.21-92.
[106] Elizabeth Atkinson, 'Tomás Saraceno: Interfacing nature and culture through art and science' in *Antennae,* Issue 48, (Summer 2019), pp.53-71.

Ahead (2018) and *UUmwelt* (2019).[107] These complex systems push beyond our expectations of art and science as well as reconfiguring the lines in and across species and technologies. I read Huyghe's work through a variety of lenses looking for multispecies living, solidarity across life forms and a repositioning of rationality in our current ecological crisis. This chapter is framed by two shorter pieces of writing that zoom in on a specific element of the artist's practice. 'Interlude: An Encounter with Otherness' reflects on the bees included in *After Alife Ahead* and was published on the blog *Something Other* in 2017.[108] Bees' collective thinking within matriarchal societies radically threatens human understandings of the world and I wonder how we can begin to value these tiny life forms outside of capitalist production for profit. 'Coda: Hospitality for Otherness' is an eerie encounter with *Untitled (Human Mask)* (2014), a video work filmed by a drone in the Fukushima exclusion zone. As viewers encounter a human/animal hybrid, I consider the limits separating animals from humans and question whether Derrida's concept of infinite hospitality can be extended outside of the human ethical circuit to this most radical of others.

The final essay completes the cycle of my thought. Moving from the non-verbal world of the octopus in chapter one, I conclude with the speaking life of parrots in chapter five. I perform a Derridean deconstruction of logocentrism here through analysis of Allora and Calzadilla's *The Great Silence* (2014). This three-channel video immerses the human viewer in a tropical rainforest in Puerto Rico, home to the critically endangered *Amazona Vittata* parrot. Through ventriloquism, the artists give the parrot a human voice, which uncannily echoes back to the viewer truths and facts we prefer to drown out. I consider the value of this type of advocation, whilst at the same time, interrogating the violence of the words we use to represent the world to ourselves. I argue that it is not language's capacities for representation but its capacities for relationality that is of crucial importance in our current moment of mass extinction.

All of these artists push the boundaries about what art can be and I identify in their work an active engagement with surreality and cyborgian ontology. Each attempts to adopt, inhabit or provoke an alternative perspective in their representation of animal life, one which counters the all-knowing gaze of the autonomous human subject. In contrast to the tradition of the animal in art as reflections of human behaviour or property, these works allow animals to exist on their own terms, in co-production with elements of the human world that they are typically denied (language, technology and art for example). In so doing I undermine beliefs about the penetrability of the world

[107] Parts of the section about *Untilled* was published Elizabeth Atkinson, 'Pierre Huyghe: Generating Antagonism Through Appropriation of Public Space' in *Curating the Contemporary,* (March 17, 2016), available: https://curatingthecontemporary.org/2016/03/17/pierre-huyghe-generating- antagonism-through-appropriation-of-public-space/, [accessed 23 October 2019].

[108] Elizabeth Atkinson, 'After Alife Ahead' in *Something Other: In Response,* (December 5, 2017), available: https://somethingother.blog/2017/12/05/after-alife-ahead/, [accessed 23 October 2019].

by humanity and reposition limits within human-animal relations. My goal is to invite curiosity for others but also to keep readers at a distance from full understanding. In this way my work reflects its subject matter in an original way. I expect this research to contribute to academic debates and discussions within Critical Animal Studies and enhance understandings for the value of art in this time of environmental devastation. Like the artworks I discuss, this project intends to allure and alienate its readers by interrupting standards ways of thinking and being. It forms an original and considered contribution to discussions about the unrational and invisible worlds of animals with whom we share our home.

Chapter 1. Octopus Reality: A Space Threatening Fragmentation

Marine Intimacies in the films of Jean Painlevé

The tide goes out, and on the shores of Carantec in Brittany, a wealth of otherworldly life becomes visible to human eyes. These sea wonders are transformed into stars in the laboratory-made science films of Jean Painlevé (scientist and filmmaker) and Geneviève Hamon (filmmaker and set-designer).[109] A small group of inanimate blobs in the sand are brought to life inside their aquariums. Under the camera lens and microscope, one species of mollusc – the acera – is attributed a narrative, characterisation, and striking visual identity.[110] Majestic and orgiastic, their worm-like forms slowly writhe against the backdrop of a starry night. These invertebrates, part of the phylum that falls as the lowest rung on Aristotle's *Scala Naturae* yet incorporates 97% of all animal species, appear as true aliens descended from another planet.[111] Entitled *The Witches' Dance*, the film showcases a lavish and hypnotic waltz as we see these ethereal molluscs float and undulate like parachuting mushrooms, defying gravity as they bloom and blossom, pulsating perfectly in time with the accompanying musical score in their quest of seduction (figure 1).

Once paired, or joined up in threes, or fours, or fives, the hermaphroditic sea snails form continuous chains of sexual activity (figure 2). Bisexual and able to act successively and simultaneously as both male and female, these creatures hold no regard for the strict rules and boundaries of heteronormativity we impose on our own species *Homo sapiens.* Bodies merge and converge, we are not quite sure where one ends and the next begins, and all gender distinctions dissolve into the mud (figure 3). The animals' bodies blur with their surroundings, lured and assimilated into an engulfing sexual space which simultaneously allures and alienates our gaze.

[109] Painlevé met Hamon whilst studying at the Marine Biology Institute in Roscoff on the Brittany Coast and she was to become his life-long companion and professional assistant. The couple worked together in the production of Painlevé's films, although few people are aware of the valuable input she had to their collaborative work. Little to nothing has been written about her and "her contributions have almost disappeared from the history of film scholarship" explains Eva Hayward. However, Hamon was instrumental in "operating equipment, designing sets and caring for the animals" for many films in which the only trace of her work lies in the opening credits (see for example *Les Amours de la pieuvre,* [1965]). Eva Hayward, *Envisioning Invertebrates and Other Aquatic Encounters,* (unpublished doctoral dissertation, University of California, 2007), p.231.

[110] Jean Painlevé and Geneviève Hamon, *Acéra ou Le Bal des sorcières* [*Acera or the Witches Dance*] (1972), 13 mins., short film/documentary.

[111] Waal, p.12.

Figure 1: Still from Jean Painlevé and Geneviève Hamon, *Acéra ou Le Bal des sorcières,* (1972), 13 min. film.

Figure 2: Still from Jean Painlevé and Geneviève Hamon, *Acéra ou Le Bal des sorcières,* (1972), 13 min. film.

Figure 3: Still from Jean Painlevé and Geneviève Hamon, *Acéra ou Le Bal des sorcières,* (1972), 13 min. film.

In this chapter I explore the implications wrought by the spaces embodied by nonhuman life to human ideologies about gender, sexuality, cognition and psychoanalysis. How might these creatures' negotiations of the world around them invert anthropocentric binaries between body and mind, inside and outside, male and female, and self and other? I analyse Painlevé and Hamon's films alongside Animal Studies theory, Cognitive Science and Lacanian Psychoanalysis to present the disruptive forces of these supposedly insignificant others.

Renowned for their controversial content, Painlevé's films caused a sensation on their original release in the early twentieth century. Explicitly erotic and subversive, he was eager to educate his audience about the alternatives that can be found in nature. The 1934 documentary *L'Hippocampe* stars the seahorse*,* a strangely medieval looking being, uncannily reminiscent of us bipeds.[112] This is a sympathetic portrayal of male placentation where the father takes on the maternal role in carrying fertilised embryos to term. With close-ups showing over two hundred eggs being transferred from the female to the male, Painlevé offers his viewers much pleasure in watching the pregnant fish endure the anguish-inducing convulsions and contractions of labour on the aquarium's floor (figure 4). Painlevé claims that *L'Hippocampe* "was for me a splendid way of

[112] Jean Painlevé, *L'Hippocampe* [*The Seahorse*] (1934), 15 mins., short film/documentary.

Figure 4: Still from Jean Painlevé, *L'Hippocampe,* (1934), 15 min. film.

Figure 5: Still from Jean Painlevé, *L'Hippocampe,* (1934), 15 min. film.

promoting the kindness and virtue of the father while at the same time undermining the necessity of the mother." Not seeking to eliminate the female role, he instead sought to "re-establish the balance between male and female."[113] Their harmonious equality is made clear in shots where tails gently entwine both before and after labour (figure 5). Painlevé is careful to assert the necessity of both gender roles in his elaborate presentation of nonhuman eroticism which provokes his viewers to reshape their understandings of both themselves and the world around them.

For Painlevé's contemporary Roger Caillois (1913-1978), the seahorse uncannily brings to life "a man-made horse: *the knight in the game of chess.*"[114] For the French polymath, these are one of the "*natural fantastic*", creatures who "contradict reality more than they emerge from it", mobilising the imagination into new realms of possibility.[115] Through their defiance of universal logic about the limited possibilities of structures and models in nature, such animals "disturb and affect us" creating "confusion in the natural order."[116] With their vertical stance, these uncanny forms – "all eyes and no mouth" – challenge human anthropocentric expectations about "what the animal or organic should look like" and our own supposed unicity writes Rose Braidotti.[117] One of the first films to use underwater footage, in *L'Hippocampe* Painlevé employs emerging and homemade technologies to bring to his audience's eyes the wonders of the natural world, wonders that had never been considered before and that permanently challenge anthropocentric and patriarchal mechanisms.[118] His films create spaces that encompass numerous weird and wonderful ways of being that threaten to overwhelm and interrupt human cultural constructions. Painlevé focusses his camera on all manner of sexualities to "demolish any romantic and essentialist assumptions about a natural order" and disrupt "the predictable old scenario of heterosexual seduction as the key to trigger desire in these posthuman times" continues Braidotti.[119] Possibly more relevant today than they were on their initial release, Painlevé's films showcase material examples of challenging cyborgian ontologies

[113] Jean Painlevé quoted in Hayward, p.229.
[114] Roger Caillois, 'The Natural Fantastic' in *The Roger Caillois Reader,* ed. by Claudine Frank*,* trans. by Claudine Frank and Camille Naish (Durham: Duke University Press, 2003), pp.349-357, p.351, first published in 1970.
[115] *Ibid*., p.350.
[116] *Ibid*., p.353.
[117] Rosi Braidotti, *Metamorphoses: Towards a Theory of Becoming* (London: Polity Press, 2002) pp.158-9.
[118] Painlevé used a special camera device inside a waterproof box with a glass plate that was used as the camera lens. This rudimentary equipment meant the camera could only shoot for a few seconds at a time. He also invented his own underwater breathing apparatus – a demand valve with a high-pressure air tank which "seemed to offer entrance into a kind of utopia of underwater living." According to Eva Hayward, he dreamed one day of creating a studio, complete with film equipment and scientific apparatus and technicians entirely underwater, Hayward, pp.228-9.
[119] Braidotti, *Metamorphoses,* p.159. These depictions contrast to his contemporary Disney films which confirmed middle-class family patterns. His films allow his audience to learn about but also *from* these strange fish. Scott MacDonald, 'Jean Painlevé: Going Beneath the Surface' in *The Criterion Collection,* (21 April 2009), available: https://www.criterion.com/current/posts/1098-jean-painlev-going-beneath-the-surface, [accessed 31 July 2019].

where the boundaries between self and other, male and female or inside and outside can no longer be upheld.[120]

The progressive ideologies of the films can be complicated. Painlevé's cruel treatment of his animal subjects – dissecting their bodies, enclosing them in aquariums and subjecting them to experimentation – is not ideal, alongside the relative lack of accreditation he awarded to Hamon. However, it is his aestheticisation of animals that interests me here. Deeply artificial and often anthropomorphic, Painlevé and Hamon's films are in fact successful not only at visually representing overlooked facets of animal life, but also structurally reflecting their radically different ways of being. The pair adopt innovative and subversive cinematic strategies to successfully re-present the wonderful weirdness of nonhuman life. Queer in content and form, these films destabilise norms by evoking and expressing a spectacular array of differences – many of which are no longer grounded in the subject or the generation of life.

Painlevé and Hamon focus on a selection of animals normally overlooked; slimy, gooey bodies that provoke irrational fears in people. Their characters are amorphous, flowing and mingling with one another with total disregard for boundaries; they suggest a level of interdependence, relationality and continuity far removed from our own anthropocentric rigidities. The films explode timeframes and spaces, inverting human sense. Other ways of living are suggested through intimate gestures and scientific encounters. Perhaps these surprisingly erotic productions offer up a new language of multispecies fluidity and flexibility that dissolves the strict hierarchies and divisions currently imposed by human heteronormativity? I explore the context of Painlevé and Hamon's productions to develop ideas about the surreal and psychological aspects of these works and the importance of these facets when representing nonhuman animals.

Science is Fiction

Jean Painlevé (1902-1989) was a trained biologist. He studied at the *Laboratoire d'Anatomie et d'Histologie Comparée* at the Sorbonne in Paris at the beginning of the 1920s, working on vital characteristics at a cellular level.[121] He began making his lab films starring "unconventional" marine fauna in 1927, producing around 200 in all before the time of his death in 1989.[122] Acting as his own producer, writing and recording the narration, editing shots, choosing the composer and sometimes even composing the score himself – in for example *Oursins* [*Sea Urchins*] (1958) – Painlevé even

[120] See chapters two and five for further discussion of Donna Haraway's cyborg theory.
[121] Jussi Parrika, *Insect Media: An Archaeology of Animals and Technology,* (Minneapolis: University of Minnesota Press, 2010), p.94.
[122] Brigitte Berg, 'The art of science: Jean Painlevé' in BFI, *Science is fiction: The films of Jean Painlevé,* (London: BFI Publications, 2013), DVD Pamphlet, pp.3-11, p.3.

cohabited with the animals he filmed.[123] Placing his subjects in aquariums within his home, we see here how the scientist/artist sought to inhabit the worlds of his subjects so as to be able to gain a glimmer of their own lifeworlds and ways of being. His goal was to make these worlds visible and slightly more comprehensible to others, distributing his films on a commercial scale.[124] Painlevé's aspiration to document and expose the lives of his weird and wonderful subjects provides an important space of surreal irrationality for us to experience the worlds of these animals.

Unique in his combination of (Surrealist) cinematic methods with scientific fact, initially many of his films were met with outrage from his contemporaries. Previously, science documentaries were restricted to the scientific community, and even here the value of cinema to science was not fully supported.[125] Painlevé broke the moulds of expectation and introduced astonishing worlds of marine life to the general public, adorning his productions with aesthetic effects to create outlandish and provocative works which at once educated and enthralled viewers. His camera lens acts as an interface between science and art, fact and fiction, and the human and nonhuman worlds.

Painlevé's desire to share his scientific knowledge with non-specialist audiences draws comparisons between his work with Jakob von Uexküll. Uexküll published some of his own scientific findings in the form of a collection of letters written to a fictional lady friend in *Biological Letters to a Woman* in 1920. He was a pioneering influence on the field of biosemiotics and an important preliminary thinker in the field of Animal Studies.[126] Uexküll's work on the individual lifeworlds of all organisms, open and responding to signs in their environments, proposes the controversial idea that all animals possess a subjectivity – not just human beings – and that the worlds we live in are restricted to our own sensual perceptions.[127] Uexküll therefore reminds his readers that worlds do exist outside of their own reality, and a plethora of meanings outside of human knowledge forms remain untranslatable and unknowable. Jean Painlevé's films focus on atypical behaviours in nature, on non-familiar subjects, on areas of science often overlooked and on the capacities of innovative technologies. Their content and methods of production reflect Uexkull's sentiment, and through his own cinematic methods, Painlevé reveals some of these spaces that had previously been left outside of human perception.

Painlevé's avant-garde approach was the product of a relationship with the Surrealist movement, specifically Alexander Calder and Ivan Goll, with whom he collaborated on the

[123] *Ibid*., p.9. Jean Painlevé and Geneviève Hamon, *Oursins* [*Sea Urchins*] (1954), 11 min. film.
[124] *L'Hippocampe* for example, was distributed through the Pathé consortium network by Bernard Natan. Berg, p.5.
[125] "The scientific community was not yet convinced that film could document without altering, distorting, or transforming the filmed organism and/or its biological processes." Hayward, p.223.
[126] See chapter five for a discussion of biosemiosis.
[127] See Uexküll.

publication of the first and only *Surréalisme* issue in October 1924.[128] Goll and Painlevé's friendship was "reinforced by an aversion to the orthodox Surrealist movement rallied around André Breton."[129] Breton's refusal to recognise any importance in music alienated Painlevé, whose films attest to his passion for experimental musical genres.[130] Painlevé accompanies his films with discordant *musique concrète* not only to enhance and popularise his documentation of marine life but also to act as an "irrational enlargement" of the aquatic gestures framed by the camera lens.[131] Whilst rigorously exploring the visual and biological strangeness of underwater life, his accompaniment choices turn his films into weird balletic productions. These films are not meant to conform to our rationalist expectations, but rather challenge us from all angles.

Despite Painlevé's segregation from Breton, Surrealist influences abound in his work, reflecting their engagement with the pre-linguistic world of the unconscious. Out of interest in the alternative perceptual worlds of animals, Surrealists created uncanny and chimerical forms to challenge typical human meanings. In Painlevé's films of "living sculptures", the camera allows "him to turn the 'medium' of these animals into a screen."[132] The watery depths, without the pull of gravity, provide a new medium to play with. His cast balloon and parachute across the screen in graceful movements impossible on solid land or in air. The liquid medium acts as an aesthetic container to the gestures and expressions of the animals, who dance and glide like astronauts in space.

James Clifford notes how the surrealist aesthetic of Painlevé's films "values fragments, curious collections [and] unexpected juxtapositions" which "work to provoke the manifestations of extraordinary realities."[133] The Surrealists themselves heralded cinema as the "elective means of surrealist expression on account of its power to disturb by betraying the expectation of the 'everyday eye' and its power to inspire imposing original visions."[134] Striving to create "fissures in the familiar" and to "dislodge common sense", they mixed the sensual and the visual, the dream world of the unconscious with reality, and the animal and human realms to propose spaces and perceptions that conflicted with the mediatory consciousness of the human subject.[135] In so doing

[128] Berg, p.4.
[129] *Ibid*.
[130] Specialist audiences were scandalised by his soundtracks, presumably to his great delight. Jim Knox, 'Sounding the depths: Jean Painlevé's Sunken Cinema' in *Science is Fiction,* pp.13-17, p.17.
[131] *Ibid.*
[132] Parrika, p.94.
[133] James Clifford quoted in Hayward, p.224.
[134] Robert Short quoted in Hayward p.222. Short goes on to describe how Surrealists explored how cinema might function as a "threat to the eye and more radically, to the two eyes of the spectator: one eye being the organ of sight and the second 'I' of the spectator's personal identity." Hayward, p.224. See for example Luis Buñuel and Salvador Dali's 1929 film *Un Chien Andalou* (*An Andalusian Dog*).
[135] Short in Hayward, p.225.

the Surrealists challenged humans as the all-knowing, all-seeing, meaning-makers anthropocentrism invites us to believe and instead proposed the possibility of more-than-human-worlds on the fringes of reality. By blurring fiction with non-fiction, documentary with fantasy, and the rational with the irrational, allowing nature to run its course, Painlevé and Hamon "complicate the narratives of science" to create their own "objective fantastic."[136] Yet these films are not fantasies, but the real worlds of nature. The couple combine biology with surrealistic beauty to showcase to their viewers that life found on the peripheries of perception has the power to shock and completely invert what we think we know about the world in which we live.

In Painlevé and Hamon's films, the animals take centre stage. Human presence is almost entirely erased, and the viewer is left alone to encounter the animals on screen. Painleve's didactic (although often comically over-the-top) voiceovers allow phenomena of the creatures to become clear to viewers, and his use of time-lapse and high-speed photography alongside extreme close-ups unveil details normally invisible to the naked eye. The prosthetic eye of modern technology shatters any idea of passive vision and instead emphasises that all eyes, including our own, are active perceptual systems building in translations to construct specific ways of seeing and thus ways of life.[137] Painlevé's films express a sympathy towards the animals themselves, an affection for them that disrupts the typical objectivity of educational and scientific standards. He instead aims to educate his audiences not via pure science but through playful narratives and normally overlooked details in a way to invite empathy and understanding for the creatures themselves. Often criticised by traditional scientists for anthropomorphism, he counters: "There are so many myths to shatter! The most preposterous anthropomorphism reigns in this field: everything has been created by Man and in the image of Man and can only be explained in terms of Man, what's the use?"[138] He admits to his fault and yet reminds us that when looking at the animal world, it is nigh on impossible for humans to really see animals on their own terms. Rather he uses anthropomorphism as "a tool for confrontation" as he juxtaposes the grotesque against the beautiful.[139] His jaunty musical scores render any seriousness absurd. The result is a collection of works that accurately convey the mysteries of the hidden depths. Art and science and fact and fiction converge to allow the meeting of human and nonhuman worlds via the screen.

For media theorist Jussi Parrika, Painlevé's project "give[s] us a glimpse of what it feels like to sense, move, and live in the world of a mollusc, seahorse, bat, or sea urchin."[140] Unlike the

[136] Hayward, p.222.
[137] Donna Haraway quoted in Hayward, p.205.
[138] Painlevé quoted in Berg, p.6.
[139] Berg, p.6.
[140] Parrika, p.95. Unlike Parrika I am not adopting a Deleuzian approach in this project but appreciate the value of his words here.

thoughts and writing of philosophers and theorists – think, for example, of Thomas Nagel's failure to truly imagine *verbally* what it is like to be a bat – Painlevé's surreal cinematic productions allow his viewers entry into the watery worlds of the animals themselves, even if these remain worlds mediated by cameras, screens and microscopes.[141] Similar to Roger Caillois, Painlevé was as interested in new technologies as the animal world and his films are as much about science and nature as they are about showcasing newfound abilities in cinematography and scientific investigation. His works are therefore less about representation than about establishing relationships between technology, the scientist, the animal subject and the viewer at the threshold of the screen. For both Caillois and Painlevé, their combination and condensation of fields led to a "rethinking of the nature of spatiality."[142] The cinema screen becomes an interface where relational affects between and across entities can be felt. By intertwining animal life with moving images, cinematic techniques and a discordant score, the screen itself becomes a realm of its own – what Caillois calls a generalised space.[143] I explore how Painlevé achieves this through a close reading of *Les Amours de la pieuvre* (1967) and in so doing experiment with my own thought to map the spatiality of this film onto the human psyche.[144]

Painlevé animates his animal subjects in evidently artificial ways which partially reveal the true nature of these creatures and their creativity. Painlevé's films do not pretend to be something they are not: shot inside aquariums whose glass surface is made visible at various moments. For Parrika he "creates a second-order reality that experiments with its own limits and potentials."[145] The potentials of the technology create spaces for animals to express their ways of being in new ways whilst at the same time highlighting the very limits of the technology. The glass walls of the aquarium or the shuttering speed of the camera reveal the inescapable interferences ongoing during human perception, reminding us of how we continuously project our understandings onto the world in order to frame it in a way we can understand. Yet so many sights and sounds remain unheard, unseen and untranslated. I look to one of Painlevé and Hamon's films to explore how some of these blind spots might be unveiled.

[141] Thomas Nagel, 'What Is It Like to Be a Bat?' in *The Philosophical Review*, vol.83, no.4, (Oct. 1974), pp.435-450 which emphasises the limits of human consciousness and its impossibility to access nonhuman worlds.
[142] Parrika, p.97.
[143] Roger Caillois, 'Mimicry and legendary Psychasthenia' in *Caillois Reader*, pp.91-103, p.102, first published in 1935. In relation to the process of mimicry amongst certain insects, space, for Caillois, becomes an alluring trap whereby organisms are assimilated into space itself, losing their own individuality or autonomy, instead engulfed by their surroundings. In this space of generalisation, binary oppositions (between inside and outside or self and other) can no longer exist and I extend Caillois's ideas to imagine a realm where all human dualisms emerging out of rationality (aka language) are dissolved. I expand on this later in this chapter.
[144] Jean Painlevé and Geneviève Hamon, *Les Amours de la pieuvre* [*The Love Life of the Octopus*] (1967), 13 mins., short film/documentary.
[145] Parrika, p.96.

The Love Life of the Octopus

Les Amours de la pieuvre begins with an abstract close-up (figure 6). We are not quite sure what we are looking at. The voiceover commences – a coarse, masculine and precise French address – emphasising the sucking strength of the octopus' eight arms.[146] As he erroneously calls these arms "*les tentacules*" (tentacles), the credibility of this film's rhetorical force is destabilised.[147] The camera pans out to reveal that this is a photograph of a man holding a (possibly dead) octopus (figure 7). The viewing eye is plunged "into an altogether unfamiliar dimensionality."[148] This is the only time a human figure will appear on screen. What this photograph draws attention to however, is the entanglement of relationships between the animal, the filmmaker, the viewer and technology in the production of this film. Our expectations are tested and confused – this does not appear like the opening to a love story. Through a certain distancing of the audience from the subject of the film, alternative ways of looking are called for.

The narrator struggles to name and label this alien creature using over the top adjectives of disgust (figure 8). The educational purpose of the film is undermined by this "disembodied" voice "seeing everything from nowhere" which does not seem to quite know what it is talking about.[149] The narrator's struggle is reflected in the pulpous, polymorphous, flabby, slithering and liquid creature, which fills the screen all arms and no body. Indefinable, incomprehensible, ungraspable and almost unnameable, the protean form of the *Octopus vulgaris* entraps and evades our vision. The discordance and fragmentation of its body are mirrored by the accompanying score by Pierre Henry – a French innovator of *musique concrète* – with its surprising sonorities and jarring tones.[150] The music seems to attest to the humour and cunning of these creatures, so well-known for their tricks and games. Its chiming tones reflect the life of the octopus much more aptly than the narrator's words.

[146] When asked how he achieved the strange, breathy narration for *The Love Life of the Octopus,* Painlevé explained that the narrator "was an old man who, out of vanity, refused to wear glasses. He was therefore obliged to stick his face right up against the script, close to the microphone, and one could hear his emphysema"—perfectly appropriate for this particular film, MacDonald.

[147] Octopus arms have suckers all along their length whereas tentacles only have suckers near the tips of the tentacle.

[148] Hayward, p.193.

[149] Haraway, 'Situated Knowledges', pp.184 and 189. For a more detailed discussion of Haraway's theory see chapter three.

[150] Hayward describes how Henry's score creates a mesh of noise and music that suggests at an "aural refraction that intensifies the film's ocular displacements." She considers whether the "torquing of sound through music (and vice versa)" through articulated murmurs, odd phrases and electric bubblings "would illustrate another way in which the spectator is both invited *into* and alienated *from* the film." n.4, p.189.

Figure 6: Still from Jean Painlevé and Geneviève Hamon, *Les Amours de la pieuvre,* (1965), 13 min. film.

Figure 7: Still from Jean Painlevé and Geneviève Hamon, *Les Amours de la pieuvre,* (1965), 13 min. film.

Figure 8: Still from Jean Painlevé and Geneviève Hamon, *Les Amours de la pieuvre,* (1965), 13 min. film.

The camera lens acts as an interface between the human and nonhuman worlds, whilst at the same time the octopus moves at the interface between air and water. This slippage across surfaces suggests at the different experiences and potentialities of the mediums of air and water, and technology and reality. The octopus glides through the porous plane between them, shifting from liquid to solid accordingly. This uncontainable body defies the limits humans erect to mark out their world. Supple fluidity as a way of being threatens the autonomy of the skeletal human subject.

Humans cannot breathe underwater; we move awkwardly and slowly and lose nearly all of our senses but taste.[151] The camera too cannot enter the water itself but provides a peephole into this other world at least from one angle. As the lens zooms in and out, shifting its magnification, speed and focus, these technical devices remind us of the artificiality of the viewing experience. What we see is never all there is to see and is forever distilled through our own viewing apparatus. Through his presentation of the artificial habitats of his film-stars, Painlevé draws attention to the idealised and imagined ways that humans look at the world. The magnified frames in his films expose not only how the image has been produced, of its technological origins, but also remind us that what we are looking at is only a partial frame. They "bring into focus the entwinement of apparatuses and the failure of the possibility of apparent vision, the failure to provide the

[151] *Ibid.*, p.39.

unmediated, distant and whole story." What we meet in Painlevé's films are not immediacies, but "interferences or interactions" with both the representation and the referent "concretely and semiotically bound in active process."[152] We can get close, but never too close, and this carefully managed distance frames the difference of the octopus and emphasises this difference. We watch Painlevé's and Hamon's film and although partially immersed in this octopus's world, this is but one of many "situated knowledges" available here: total identification is disallowed.[153] The couple invites us to experience the animal's *Umwelt* whilst taking pains to remind us that we can never know everything about these animal others.[154]

In Eva Hayward's reading, she points out how with its opening frames and sequence of images sped up, slowed down or zoomed right in, "the film undermines and expands the expository form and demands a reconsideration of modes of perception."[155] The narrative and visual sequencing are distorted, subverting educational purposes through creative music choice and aesthetic concerns. The portrayal of this octopus is constantly and obviously framed by the biased voiceover, the raw soundtrack, the challenging cinematography and aesthetic editing. This is not a simple animal documentary but an art production that engages with Surrealist methods. Uncanny and disjunctive forms emerge, temporalities and dimensionalities become amorphous. We are forced to adopt alternative perspectives. It seems that the most effective way to represent animal worlds is through a surreal lens that can detect the irrationality and elements of surprise inherent to human and nonhuman encounters.

Our gaze follows this alien creature, slinking between rocks and shadows, inscrutably different with its bulbous head and eight splaying suckered limbs. We see its cunning powers of deception as the octopus pours itself through cracks the size of its eyeball, and masquerades as seaweed swaying in the ocean's currents (figure 9). Its body floats everywhere and nowhere at the same time. The protean materiality of this frameless form dissolves into complete immateriality in a second as the octopus contorts its limbs or changes its skin colour and texture to merge completely with its surroundings.[156] The voiceover emphasises the persistence and pest-like nature of octopuses, finding them everywhere in great numbers, alongside their alarming ability to live both

[152] *Ibid.*, p.206.
[153] Haraway, 'Situated Knowledges' in *Simians.*
[154] Jakob von Uexküll's term here to mean the individual perceptual lifeworld of an organism.
[155] Hayward, p.194.
[156] Octopuses change colour by contracting and relaxing radial muscles that control tens of thousands of tiny sacs of pigment in their skin. When the muscles are contracted, the sacs expand and straw-yellow, orange, red-brown and black pigments spread. When relaxed, the sacs collapse, and the amount of visible pigment is reduced. Light can then hit underlying reflecting cells to produce interference colours – blue and green, as well as black-browns, iridescent and whites. This whole operation is controlled not by their brains but by their central-nervous systems. Angie Keefer, *An Octopus in Plan View,* BoTSL#1 (July 31st, 2019) p.20, available: http://www.servinglibrary.org/journal/1/an-octopus-in-plan-view, [accessed 31 July 2019].

Figure 9: Still from Jean Painlevé and Geneviève Hamon, *Les Amours de la pieuvre,* (1965), 13 min. film.

Figure 10: Still from Jean Painlevé and Geneviève Hamon, *Les Amours de la pieuvre,* (1965), 13 min. film.

on land and in the sea. They propel themselves through watery volumes, passively drift at any depth and are even able to walk on solid ground. This creature defies the natural force of gravity to which humans are so rigidly bound. The camera shots demonstrate the beauty of this animal as it inhabits its *Umwelt* at one with its surroundings. The dissonance between the visuals and audio of the film reflects the complete confusion a creature like this provokes in us.

The camera zooms in to the superior eye of this simple mollusc, detailing its bulbous shape and the folds of skin that form its eyelids (figure 10). Cephalopod researcher and philosopher Peter Godfrey-Smith compares these eyes to our own in their ability to adjust the focus of an image on the retina, similar to the mechanics of a camera.[157] However, octopuses rarely rely on their vision, using their superior sense of touch and receptivity to chemical information to catch prey, along with their skin's sensitivity to light and UV rays.[158] With millions of elastic cells under the skin that contain coloured pigments, an octopus can adjust its colour from moment to moment merely by stretching these open or squeezing them shut. Truly response-able, an octopus can see with its skin, and mimic what it sees.[159] They change colour to reflect their moods and communicate with others, responding to their environments physically, gesturing and gesticulating in a visual language we cannot understand. These abilities appear radically different from our own, yet they cannot be labelled inferior. Octopus language is not random nor instinctual, but learnt, practised and refined over their short life spans. They "have a command of between thirty and fifty different patterns per individual animal, and can change colour, pattern and texture in seven-tenths of a second."[160] The octopus experience of the world is purely tactile, sensually feeling with their arms or as Godfrey-Smith calls them "eight enormous lips."[161] They feel in order to see with an erotic sensuality and in so doing embody the space around them through astounding mimicry. Both space and vision are haptic in the octopus world, creating a multi-dimensional realm of hidden volumes and depths.

[157] Peter Godfrey-Smith, *Other Minds: The Octopus and the Evolution of Intelligent Life,* (London: Harper Collins, 2017), p.73.

[158] Octopus specialist Jennifer Mather writes how although we know so much about octopus visual capacity "because we find it easy to study […] it may not prove to be as important as we believe." 'What is an Octopus's Mind?' in *Animal Sentience,* 26(1), (2019), p.12, available: https://animalstudiesrepository.org/animsent/vol4/iss26/1/, [accessed 31 October 2019].
Our focus on octopuses' eyes – a reflection of our own superior sense – reveals the arrogant and self-determined perceptual worlds of humans, unable to accommodate the realities of other life as they really are.

[159] Godfrey-Smith, p.121. Sy Montgomery describes the skin of an octopus to be "one giant, fantastically sensitive mucous membrane, similar to the lining of the mammalian gut" with the result that many innocuous chemicals, nutrients and pollutants can be toxic to cephalopods. *The Soul of an Octopus,* (London: Simon & Schuster, 2015), p.183. Haraway, *Species, s*ee 'Introduction' for an explanation of "response-ability."

[160] On a pacific coral reef, a researcher counted an octopus changing colour 177 times in one hour, Montgomery, p.45.

[161] Peter Godfrey-Smith, 'Other Minds: The Octopus, the Sea, and the Deep Origins', *Talks at Google,* (11 May 2017), available: https://www.youtube.com/watch?v=iENXfnOobzw, [accessed 31/07/19].

Figure 11: Still from Jean Painlevé and Geneviève Hamon, *Les Amours de la pieuvre,* (1965), 13 min. film.

Figure 12: Still from Jean Painlevé and Geneviève Hamon, *Les Amours de la pieuvre,* (1965), 13 min. film.

With empty shots of rippling water alongside abstract close-ups of gills, suckers and eyes, Painlevé and Hamon create a disorienting film where we never quite know where we are or what we are looking at (figure 11). The voiceover continues efforts to de-*monstrate* the horrifying difference and alarming abilities of the octopus whilst the viewer struggles to make sense of the collage of information on screen.[162] The film's cinematography attests to the non-representability of this octopus, who lives a life uncannily reflecting or totally dissolving into its surroundings. It threatens to devour all it meets into the vortex of its aquatic world, multiplelimbs sucking and swallowing wherever they touch. This body of arms seems to be everywhere and nowhere all at once. A crab is engulfed in a kiss of death and as the frame lingers too close to the octopus's beak, we fear the camera (and us too) might be devoured in a deathly embrace (figure 12). The film's title more accurately reflects the sexual way of being of this slippery cephalopod than the ambiguous sex act we do manage to catch sight of.

The struggle between prey and predator is mirrored as two octopus's meet and begin their risky mating ritual. As they taste and kiss one another with their wandering arms, their bodies entwine and entangle; all structure and formation are lost (figure 13). The camera provides the only

Figure 13: Still from Jean Painlevé, *Les Amours de la pieuvre,* (1965), 13 min. film.

[162] With "demonstrate" coming from *monstrum* meaning "monster", itself derived from *moneo* which is "to warn".

Figure 14: Still from Jean Painlevé and Geneviève Hamon, *Les Amours de la pieuvre,* (1965), 13 min. film.

Figure 15: Still from Jean Painlevé and Geneviève Hamon, *Les Amours de la pieuvre,* (1965), 13 min. film.

container to what we see, this frame awarding some translatability to an otherwise non-representable moment. The absence of visible genitalia – the male octopus's sex organ located at the tip of one his arms – antagonises the naming human viewer, who cannot be sure who is who or what is what (figure 14).[163] Hayward writes how the "ambiguity" of the sexual act "distorts a culturally located human viewer-ship predicated on sexual difference" with anthropocentric sexual difference being replaced "by a blurring, a kind of instability at the level of species and sexes."[164] Once more Painlevé and Hamon challenge typical, fixable and nameable heteronormativity in this love scene which evades the sexual standards we erect. Instead, the "disallowable sex of the multilimbed octopus" dissolves our categories into fluid and porous motions of radical uncertainty.[165] Unidentifiable, as this octopus is pushed into the human sexual imaginary, "a friction is produced between the paradoxical tendencies of seeing octopuses (and animals in general) as pure alterity and as mirrors of ourselves."[166] Our words and behaviours cannot be applied here, and instead, pure difference swells on screen.

Their colours surge in response to one another, emphasising the sensuality and sensibility of these bodily creatures. The initial struggle of the mating act – the female swallowed in the male's embrace – is pacified into a more balanced encounter, one of tentative stroking and stolen glances from one octopus to the other.[167] Yet the narrative of the film emphasises the tensions between sexual difference through dramatic inversions: the male is smaller, tentative and fearful of this predatory female prone to cannibalism. He keeps a prudent distance from her, whilst she remains imposing and engaged throughout (figure 15). She keeps control of the situation and maintains her comportment despite the male's penetration of her space. All sense of time here is distorted, we are not sure how long they have been mating, is it hours or days as the voiceover claims?[168] Once he successfully performs a respectful insemination of the female's eggs, the heraldic musical jars with this intimacy to inject a touch of humour to this sensitive moment. Painlevé and Hamon continue to interfere and distance their viewing audience from their animal subjects to confuse and confound

[163] For another discussion about the human expectation of visible genitalia see the prelude. Octopuses are gonochoric however there is little sexual dimorphism, making it difficult to distinguish between the two sexes.
[164] Hayward, pp.201-2.
[165] Mel Y. Chen, *Animacies: Biopolitics, Racial Mattering and Queer Affect,* (Durham: Duke University Press, 2012), p.99.
[166] Hayward, p.202.
[167] Mather points out that this temporary tolerating of one another in the mating process is an indication of social sexuality within the typically solitary life of the octopus, p.13. Another incidence of adaptive sociality amongst octopuses is at *Octopolis*, in Australia's Jervis Bay where a group of octopuses live together, possibly due to the shortage of food in surrounding areas. Here octopuses socialise with one another, aggressively and passively, and have developed a series of specific postures to be able to communicate with others in ritualised ways. Keefer p.20. See also Godfrey-Smith, *Other Minds* for an in-depth discussion of *Octopolis*, pp.179-204.
[168] The copulatory ritual can in fact last for up to a month claim Vilém Flusser and Louis Bec in *Vampyroteuthis Infernalis: A Treatise,* trans. by Valentine A. Pakis, (Minneapolis: University of Minnesota Press, 2012), p.22.

any certainties. The male's arm now hastily retreats, and the moment is lost. The screen is filled with the enlarged passage of billions of male sperm into the female body (figure 16). From intimate distance to scientific close-ups, the viewer must keep up with the film's ongoings.

Figure 16: Still from Jean Painlevé and Geneviève Hamon, *Les Amours de la pieuvre,* (1965), 13 min. film.

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successfully performs a respectful insemination of the female's eggs, the heraldic musical jars with this intimacy to inject a touch of humour to this sensitive moment. Painlevé and Hamon continue to interfere and distance their viewing audience from their animal subjects to confuse and confound any certainties. The male's arm now hastily retreats, and the moment is lost. The screen is filled with the enlarged passage of billions of male sperm into the female body (figure 16). From intimate distance to scientific close-ups, the viewer must keep up with the film's ongoings.

The camera shifts back to the female, now alone, difficult to discern in her den where she hangs her eggs in long chains (figure 17).[171] Here she will remain fanning her brood without rest nor sustenance until the embryos meet full term. Shortly after they hatch, she will die.[172] The final moments of the film allow Painlevé to show-off his most advanced technical tools. The development of the octopus eggs is enlarged and sped up 1,400 times showing the torsion and rotation of each embryo (figure 18). Three weeks pass in seconds on screen and tiny octopuses become visible in the eggs (figure 19). The voiceover reminds us of their size, only two millimetres long, whilst the viewer is made privy to this fascinating biology in all its stages. The final shot of a full-grown octopus swimming amongst the floating babies now part of the water's plankton reminds us of the dramatic scales and timeframes that have been traversed and condensed into this film (figure 20). Any stable framework is destroyed, and we instead encounter human logic riddled with animal enigmas.[173] The octopus's body shows itself to be uncontainable by the human constructions of technology and science, and instead the film collages a range of expressions to mirror the subversive powers of the octopus. Human order and meaning lose control here, eluded by the supple polymorphy of the octopus's body. Painlevé and Hamon represent an alternative aquatic eight-limbed way of living that lies outside of human comprehension. And at the same time, the film skilfully evades human understanding through its cinematography, staging and editing choices. *The Love Life of the Octopus* invites human viewers to enter an aquatic world of radical difference but at the same time consistently curtails our entry as if to emphasise the inevitable errors of our interpretations. Nothing typically human makes sense, and our understandings of time and space are engulfed by the surreal tentacularity of this animal.

[171] In the wild, octopuses lay between 67,000 and 100,000 eggs, and this ritual of guarding, aerating and cleansing her eggs, is an embodied memory performed "by mothers back hundreds of millions of years" writes Montgomery, p.96.

[172] Octopus are semelparous, meaning they mate only once in their lifetime, what Godfrey-Smith calls "big bang" reproduction, p.171.

[173] Nandita Biswas Mellamphy, ([W])omen out/of Time: Mètis, Medea, and Mahakāli' in *After the 'Speculative Turn': Realism, Philosophy and Feminism* ed. by Katerina Kolozova & Eileen Joy (NY: Punctum Books, 2016) pp.133-158, p.135.

Figure 17: Still from Jean Painlevé and Geneviève Hamon, *Les Amours de la pieuvre,* (1965), 13 min. film.

Figure 18: Still from Jean Painlevé and Geneviève Hamon, *Les Amours de la pieuvre,* (1965), 13 min. film.

Figure 19: Still from Jean Painlevé and Geneviève Hamon, *Les Amours de la pieuvre,* (1965), 13 min. film.

Figure 20: Still from Jean Painlevé and Geneviève Hamon, *Les Amours de la pieuvre,* (1965), 13 min. film.

Our Most Radical Other

A squishy, boneless, "head-footed" invertebrate related to snails and clams, the octopus has for centuries been overlooked.[174] It is considered inferior and insignificant in comparison to mankind and most other animals. Even the invertebrate name has evolved negative human connotations, suggesting at disgraceful and morally dirty behaviour. *Invert* the noun names the sexually depraved or those "without moral character" or principles.[175] Yet octopuses are an ancient animal, fossils found dating back to the Cambrian era around 542-488 million years ago.[176] They have been around a lot longer than us and the other land vertebrates, so demand a respect for their longevity and evolutionary endurance at least. [177]

Philosophers Vilém Flusser and Louis Bec discuss the physical nature of human interaction with other lifeforms. They contrast the icky experience of stepping on a squishy, gooey mollusc to the tragic sound of "a cracking bone under our shoe." Although "[w]e feel a connection with lifeforms supported by bones […] other forms of life disgust us" viscerally, not just visually.[178] However, maybe this disgust is rooted in a deeper psychological experience? Empathy only works when we can map our bodies onto that of another. Yet with their eight arms, three hearts, blue blood, a brain that wraps around their throat and a covering of slime instead of hair, such projection remains impossible between humans and octopuses.[179] According to Hayward, in organisms with such overwhelming bodily differences an "identification politics of erasure rather than empathy" arises.[180] Any ideas about octopus subjectivity, suffering or intelligence are wiped away so we can reassure ourselves that they do not really matter as beings in themselves.

Our last common ancestor was a small, flattened worm that existed 600 million years ago. To create some perspective, we split from birds and mammals 320 million years ago and from chimps a mere six million.[181] This human-octopus ancestor lived at a time when there were no land mammals. Water was the original home of both of our minds. It was in the ocean that all species and our cognitive abilities developed and gave rise to the evolutionary divisions that came later down

[174] They have a squishy body that directly joins to eight limbs, while the body (or mantle) is positioned behind the head. Waal, p.246.
[175] Hayward, p.14.
[176] *Ibid.*, p.235.
[177] Most invertebrates live on the ocean bottom and have a shell to protect them. Octopuses are left incredibly vulnerable living in shallow reefs where predators abound without a hard shell for protection.
[178] Flusser and Bec, p.11.
[179] Hayward, p.235 and Montgomery p.13. They are blue-blooded as a result of the copper found in their blood to transport oxygen – in humans it is iron which performs this function and makes the blood red. Hayward, p.235.
[180] Eva Hayward, 'Sensational Jellyfish: Aquarium Affects and the Matter of Immersion', *Differences,* 23, (2012), pp.161-196, p.177.
[181] Godfrey-Smith, p.8.

the line. Peter Godfrey-Smith's book about cephalopods, *Other Minds,* drives home the fact that the history of humans and animals is a history of life in the sea. When animals finally did crawl out onto dry land, they took the sea with them. This is a shared history that we are unable to shake off. If we can begin to acknowledge this shared past and instead make use of it as food for thought rather than as a repressed bad memory, we might be able to develop new ideas about how mental capacities evolved and in so doing learn to respect the variety of differences in cognition we encounter in the natural world. [182]

Although not matching the 100 billion neuron capacity of the human brain, the octopus has 500 million neurons spread across its body. Its entire physical matter is cognitive material. On top of the 65 million neurons in its central brain, each octopus has nearly 2,000 suckers, every single one equipped with its own ganglion (a group of nerve cell bodies) of half a million neurons.[183] They also have long chains of ganglia running along each autonomous arm, all of these connecting up with each other and with the central brain.[184] This distributed cognition creates a balance of both central and local control, (a severed arm, Ethologist Frans de Waal notes, may crawl on its own and even pick up food[185]) with autonomy falling to each arm and across the octopus's skin. This "critter" is unparalleled in the animal kingdom.[186] With its far-reaching physical and mental capabilities, the octopus's very materiality becomes an embodiment of pure possibility dependent upon response-ability. An octopus's attunement to its surroundings provides a model we might want to consider as our own environment becomes increasingly hostile to our polluting presence.

Godfrey-Smith's book carefully considers the evolutionary trajectories of humans and cephalopods and then draws comparisons between the functioning of our minds and theirs. Despite our radically different genetic foundations, both humans and octopuses share a sophisticated intelligence rarely matched in the animal kingdom. Frans de Waal too considers animal behaviour and cognition in his book *Are We Smart Enough to Know How Smart Animals Are?* The title itself suggests our poor judgement when comparing animals to ourselves (never the other way around). Waal recalls the sighting of an octopus in the seas around Indonesia collecting coconut shells.[187] These are left outside of her den in her octopus's garden until they are required to hide beneath when a predator attacks. Normally reliant upon camouflage, this additional self-protecting measure

[182] See *Ibid.* for a larger discussion of this shared evolutionary past.
[183] Each 2.5cm sucker can lift 35 pounds. With 2,000 suckers all of that size, octopuses have the ability to lift 70,000 pounds. Montgomery, p.14.
[184] Godfrey-Smith, p.66. Each arm is so independent that even when severed, it may continue to function without the rest of the body intact. Montgomery, p.22.
[185] Waal, p.248.
[186] This is Haraway's term for animals or companion species to emphasise how we are all "relationally entangled rather than taxonomically neat." See *Species*, p.330, n.33.
[187] Waal, p.94.

demonstrates resourcefulness and clear foresight as well as vigilant cunning and deception in the face of one's enemies.

Octopuses are planners and thinkers just like us, able to manipulate their environments and anticipate what is needed for the future.[188] Waal reminds us that "cognitive evolution is marked by many peaks of specialisation" making "the ecology of each species key."[189] The aquatic environment and unique situation of octopus life has led to the evolution of a mind incomparable on Earth. Spread across a head and eight arms, this is an example of distributed, decentralised and embodied cognition, a radical counter to the discrete, autonomous and centred self of humans. This is an intelligence that extends into the body and is not restricted to the mind as Levinas proposed.[190] Octopus expert Jennifer Mather argues that "if we can understand their intelligence, we can understand just how different intelligence can be and can manifest."[191] Learning to empathise with such difference may enable us to develop respect for others across the spectrum of nonhuman life.

Animal scientists increasingly emphasise how animals – most of whom can *do* a lot more than we can – need to be tested on their own specialised skill sets, rather than on ours.[192] Unlike other molluscs typically protected by their shell (such as the hermaphroditic acera whom we met earlier), an octopus has a malleable and unwieldy body, extremely vulnerable to predation and almost impossible to control in the dark currents of the ocean. It is for this reason that they have evolved a highly complex nervous system, which is responsible for their sensuous eight-armed intelligence, rather than the central brain itself.[193] Unable to rely on their physical strength or fitness, octopuses were required to develop a large, sprawling network of neuronal cognition to compensate via sneaky intelligence. Similarly, as shell-less, hairless, clawless primates who have evolved to walk on two legs with our most vulnerable organs permanently exposed, humans too have grown large brains and accompanying mental prowess to counteract our physical weaknesses in the struggle for survival. Perhaps we are not so different from these icky molluscs as we like to tell ourselves?

[188] Mather, p.10.
[189] Waal, p.12.
[190] The body encodes some information about the environment and how it must deal with this information, not all information processing is confined to the brain here. Godfrey-Smith describes how "the body creates *constraints* and *opportunities* to guide its actions, p.74.
[191] Jennifer Mather, 'Mind in the Waters: the what, where, why and how of Octopus Intelligence' presented at *Cephalopod Cognition,* (29 September 2019), available:
https://www.youtube.com/watch?v=Y_rUamPvULk, [accessed 31 July 2019].
[192] See for example Waal, Despret (*Animals*) and Godfrey-Smith (*Other Minds*).
[193] Godfrey-Smith, *Google*.

Octopus lives (unlike our own) seem to speak against the advantages of having a large brain.[194] These are solitary creatures who live a mere two to four years, with no infant-rearing period: octopuses rely upon instinctive behaviours rather than taught experience inherited over generations.[195] Their intelligence is tactile and technical, pushing against highly socialised (human) conceptions of intelligence. Mather describes how they demonstrate capacities for plasticity and attention allocation as well as the principle "whatever works" to sequentially solve problems.[196] Octopuses are able to use tools and devise elaborate escape routes, as well as distinguishing between and remembering different humans when under study or in captivity. All this evidence demonstrates their ability to flexibly acquire information through learning and use, which for Mather suggests at a "cognitive map" or evidence "for a mind" in cephalopods.[197] Despite the apparent hindrances and radically different circumstances to developing higher intelligence, octopuses undeniably seem to have some form of 'mind', yet it remains impossible for humans to imagine what their experience of the world (and 'self') is like. The lifeworld of the octopus brings to the fore the rigidity of our human limits.

Mind-Body/Body-Mind

For Chilean biologist turned philosopher Humberto Maturana, consciousness is "an epiphenomenon" and therefore "not a defining characteristic of the human as an autopoietic entity."[198] Maturana developed his theory of *autopoiesis* with Francisco Varela in 1973. This posits living organisms as self-enclosed and self-sustaining systems. All entities exist independently from others, relating to their environment in specific and individuated ways.[199] An organism is shaped entirely by its engagement with its environment, its perceptions restricted according to its physical structure. Life is *embodied*, positing all beings as discrete and 'perfect' in relation to their own individual environment.[200] From this perspective, there can be no hierarchical system and no absolute world or backdrop of reality to which humans have total access. Rather, the environment

[194] Octopuses have the same sized brain – that of a walnut – as the African grey parrot, and "for an invertebrate, [this is] enormous," Montgomery, p.48. For further discussion of parroting, mimicry and biosemiosis, see chapter five.
[195] Hayward, p.33.
[196] "For primates and octopuses, measuring the number of situations in which animals can learn may be a more appropriate measure of intelligence" suggests Mather, p.21.
[197] Mather, p.22.
[198] N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics* (Chicago: University of Chicago Press, 1999), p.145.
[199] Humbert R. Maturana and Francisco J. Varela, *Autopoiesis and Cognition* (London: D. Reidel Publishing Company, 1972).
[200] Uexküll too found a perfection within individual organisms and we can read here the influence of his thought on *autopoiesis*.

for each form of life lies in correlation to the organism and its capabilities. Mind can no longer be described as a "unified and homogeneous unity, nor even a collection of entities", but as "a disunified heterogeneous collection of processes" just as we observe in the body/mind of octopuses.[201]

After breaking away from his work with Maturana, Varela would later publish *The Embodied Mind* with Evan Thompson and Eleanor Rosch in 1991. Here the scientists elaborate on how "the organism and its environment are mutually enfolded in multiple ways, so what constitutes the world of a given organism is enacted by that organism's history of structural coupling" with its world creating a "codetermination of animal and environment."[202] This codetermination creates a sense of the embodied embeddedness of each and every organism, existing as a closed system yet emerging out of the history of its own life and its relationships to the world in which it lives. Varela describes embodiment to have the double sense of both "the body as lived, experiential structure and the body as context or milieu of cognitive mechanisms." Therefore, cognition becomes "*embodied action*", the world not being independent from our perceptual and cognitive capacities. "Cognition has no history beyond its history of embodiment" he explains.[203] Body and mind are now inseparable, not only from each other but also from their surroundings. Reality becomes subjective, confined to our individual perceptions and physical experiences of the world.

Varela's ideas demonstrate not only the limited cognitive field of humans but also reflect the congruent cognitive capacities of octopuses. These animals with distributed and mimetic bodies and minds, initiate and shape their environments in reciprocal relationships. Octopuses show us how smoothly organism and environment are mutually enfolded and codetermined, and perhaps it is this recognition as we watch octopuses in their natural habitats that truly alarms and astounds our vision. For a species so intent on determining the separation of mind, body and environment, the entwining and entanglement of an octopus self with/in space is unimaginable and so non-representable and unspeakable to humans. Octopuses are not only our ultimate other, so radically different that we fail to imagine what their life might be like, but they totally invert our anthropocentric ideologies about the individual and discrete human mind and experience of self.

The octopus sense of self is unlocatable and this alone makes us shudder. Without joints, their bodies are incredibly difficult to control, and Godfrey-Smith explains that rather than enacting a close and direct control over each and every movement, the cognitive structure evolved to allow

[201] Francisco J. Varela, Evan Thompson and Eleanor Rosch, *The Embodied Mind: Cognitive Science and the Human Experience,* (Cambridge, The MIT Press, 1993), p.107.
[202] *Ibid.,* p.203.
[203] *Ibid.,* xx.

the individual autonomy of each limb.[204] He contemplates if perhaps in octopuses, "we see intelligence without a centralised self?" He points out that with their physical and physiological design, can we really expect there to be a coherent and unified sense of self at all, a *centre* of experience?[205] The impossibility for us to imagine this suggests at the limits of human thought but also at the potentials to go beyond it. Although they alarm us at first, octopus lives require radical new perspectives and the acceptance of misrecognitions and irrationalities in order to come into being in the human realm. Considering animals in themselves and on their own terms allows us to break the moulds of human ideologies and normativity and open up thought and experience to all kinds of ways of life.

Inverting the Question

"Invert" in verb form connotes a shifting, turning and transformative motion, diverting from proper purpose, turning outside inward and vice versa.[206] It describes a cunning and wily form of behaviour reflecting the astounding capacities for deception cephalopods possess. It is this capacity for reversal and transformation that I focus on to subvert and translate human perceptions and beliefs into new understandings and ideas that can accommodate nonhuman lives and experiences. The protean, flexible form of an octopus is so radically different from our own skeletal frame, yet perhaps this plasticity allows us to rethink the difference they embody in new ways. Flusser and Bec describe octopuses to be "ek-centric animals whose bodies incline toward coiling both as a whole and in all their details."[207] Unlike us humans, these animals are not oriented linearly, their world is a "fluid, centripetal whirlpool" in contrast to our "static and established" human plane.[208] Our different physiologies make our cognitive structures inverses, and what we encounter and how we experience space become drastically different. For us the world "is flat", we live on a passive surface, supported by gravity in space, moving linearly from bodies and places. For octopuses, the world is a watery volume through which they bore like a "spring" or "a screw". This is a dynamic "realm of coiled tension, laden with energy" without "immutable and eternal forms." The "mutability and

[204] Godfrey-Smith, *Google*.
[205] Godfrey-Smith quoted in Montgomery, p.160.
[206] Hayward, pp.14-5.
[207] Flusser and Bec, p.14.
[208] Dan Mellamphy, 'Between Beckett and Bec: The *Mètic Hexis* and *Flusserian Flux* of *Vampyroteuthis Abductionis,* (unpublished) available on *Academia.edu:* https://www.academia.edu/4185250/Between_Beckett_and_Bec_The_M%C3%A8tic_Hexis_and_Flusserian_Flux_of_Vampyroteuthis_Abductionis, p.3, [accessed 23 October 2019].

plasticity of […] impressions" received by the sensual kisses of their groping arms, means the octopus world is not predetermined, but always open to possibility and change.[209]

Because each arm processes a lot of information that never makes it to the brain, octopuses are in fact able to "outsource much of the intelligence analysis [from the outside world] to individual body parts." Individual "arms can get in touch with one another without having to go through the central brain" and are more like separate creatures rather than part of one unified whole.[210] This immediate and tactile experience of the world lacks the filtering process of the human experience – our eyes see the world and these visions are translated by our brains into the verbal expressions we already know.[211] Much like in Painlevé's film, our internal representations of the world are subject to interference and mediation from an array of forces (such as language, social norms and history). The octopus instead feels the world in its immediacy, sucking in the environment and digesting its impressions into self-expressions. Unlike the human world which must always be translated into signs, symbols and words, the octopus engulfs its fluid vortex, becoming one with its environment and exuding its surroundings. It cunningly melts together body and mind and outside and inside, evading and escaping our efforts to grasp, name and know. Octopuses inhabit a depersonalised space where binary oppositions and dualisms dissolve. Vacated of the human subject, this is a space where *unrationality* prevails. The impossible becomes possible and unusual alliances develop. Octopuses, in their very way of living, threaten all notions of human sense. Yet they are not our opposite. Octopus space is instead a materialisation which interrupts human order from within.

Flusser and Bec see the *Vampyroteuthis infernalis* (vampire squid from hell) as an evil inverse of humanity, creeping out of the shadows of the underworld. Octopuses' cannibalistic anti-socialism embody the most abhorrent and repressed traits of humanity. For these philosophers, an encounter with this radical other would cause an eruption or dissolution of opposites – "the question of heaven and hell, of good and evil, would be no more." Distinctions between these polarities would not hold and instead converge into one destructive mass. They wonder if the concept of mind itself (*Geist*) would end, the octopus reflecting to us our most "grotesque political folly" and tendencies towards artificiality.[212] Their treatise emphasises the human distinction from these animals and warns against the meeting of two such radically different intelligences, for fear of a collapse of all meaning and frames of reference. They seem to voice the fear that when confronted with our ultimate other, how can we be sure that our experience is actually as we believe it to be? Yet these questions are left unanswered, perhaps out of a fear of probing too deep.

[209] Flusser and Bec, p.42.
[210] As in certain species of spider, octopuses will choose to detach their own arm if it becomes injured, breaking it off and eating it. Montgomery p.161.
[211] This resulting in the blurring of specificities when we encounter anything not human.
[212] Flusser and Bec, pp.59-60.

Flusser and Bec's text presents an insightful look into the world of octopuses. Their descriptions of octopus inhabitation of water and space enable imaginations to emerge which complement the visuals seen in *The Love Life of the Octopus.* Despite obvious blind spots in both works, the film and text allow a partial, situated view into the octopus *Umwelt*. However, Flusser and Bec's impressive insights into cephalopod living are overshadowed by a greater purpose. For them, these animals are incomprehensible monsters, almost mythical creatures. The purpose of the treatise is not to further understanding of the animals themselves. Rather it remains concerned with human politics and phenomenology:

> What will be presented here is, accordingly; not a scientific treatise but a fable. The human and its vertebrate *Dasein* are to be criticized from the perspective of a mollusk. Like most fables, this one is ostensibly concerned with animals.[213]

Despite its biological detail, this text does not strive to uncover the mystery of the *Vampyroteuthis.* Rather it is to employ this animal as a (negative) mirror to hold up against humanity. Unlike Painlevé and Hamon's film which subverts human codes and actively contradicts itself to create an immersive and irrational experience to present the world of an octopus, this linguistic encounter merely reflects and explores human words and concerns as read in the world of the *Vampyroteuthis infernalis*. Narcissistic and biased, the text encompasses the human need to read ourselves and our behaviours in animal others. I argue that if we are to develop a true sensibility to animals and their subjectivities, we need to look beyond our human frames of reference into new spaces of possibility.

Alluring Space

To the ancient Greeks, the octopus was the ultimate master of polymorphy, its body forming a knot with its countless, flexible, undulating limbs, reaching out in all directions.[214] Inherently malleable in its material form, every part of the octopus's body is a bond which can secure anything but be secured by nothing. Their outlandish powers of cunning and capture represent the intuitive model of intelligence known as *Mètis.*[215] A tentacular intelligence of the body which proceeds by

[213] *Ibid.,* p.10.
[214] Polymorphy is the capacity to make a net or mesh of bonds using cunning intelligence.
[215] Marcel Detienne and Jean-Pierre Vernant, *Cunning Intelligence in Greek Culture and Society*, trans. by Janet Lloyd, (Chicago: University of Chicago Press, 1991), pp.1-54.

tricks and turns, *mètis* is the missing term in Greek antiquity between *poiesis* and *techne*.[216] As Nandita Biswas Mellamphy draws our attention to in '(ᵂ)omen out/of Time: Mètis, Medea, and Mahakāli', citing Sarah Koffman, "the entire foundation of Western thought from Plato onward has been firmly anchored to this Olympian sovereign principle which is constituted by the exclusion of cunning intelligence."[217] The threatening powers of multiplicity, incalculability and subversion of any limits of hierarchy or binary posits *mètis* outside of any dialectical logic. Intelligence itself "becomes a constant movement" of polymorphism, reversal, deceit and duplicity."[218] The octopus as *mètis* embodies an unrational realm where human cultural constructions cannot establish themselves. Language cannot maintain its grip here. *Mètis* threatens human order with an interruption from *within*. And once it erupts its being, it threatens to swallow rationality into its radical space of non-meaning.[219] Overtly feminised and animalised, *mêtis* defies patriarchal and anthropocentric logic.[220] It stands outside and beyond typical understandings of the world as we know it, evading categorisation within these modes of thinking and being, and in this way becomes the most threatening.

With the exclusion of *mètis* from the principles of Western thought, little time has been devoted to considerations of cephalopod intelligence or cognitive capacity. Instead, our focus has been confined to the material form of the octopus body and what we can learn from it for our own ends. The cephalopod ability to secrete a thick, viscous ink to engulf its enemies (and itself) inside an impenetrable night, made the octopus's material form appear as a permeable, supple, flexible and uncontainable black hole. Human tools for hunting, fishing and self-defence have since been modelled upon this capacity.[221] Yet the octopus's shape-shifting abilities are not simply a physical threat. They leak outside of the boundaries of their own physicality, contaminating and engulfing the forms of others. Octopuses dissolve background into foreground and self into other, threatening not only life forms but our very experience of being in the world. They are a tactile and moveable *space* which literally engulfs all that it encounters. Octopus intelligence has been omitted from human thought, too impenetrable to be considered or admired. Yet I suggest it is actually their very threat

[216] Dan Mellamphy and Nandita Biswas Mellamphy, 'From the Digital to the Tentacular, or From iPods to Cephalopods: Apps, Traps, and *Entrées-without-Exit'* available on *Academia.edu*: https://www.academia.edu/4184524/From_the_Digital_to_the_Tentacular_or_From_iPods_to_Cephalopods_Apps_Traps_and_Entr%C3%A9es_without_Exit, [accessed 25 October 2019]. pp.3 and 9.
Poiesis which roughly means making and *techne* which approximates art or skill.
[217] Mellamphy, '(ᵂ)omen out/of Time', p.148.
[218] Detienne and Vernant, p.23.
[219] Continuously oscillating between two poles, *mètis* has also been compared to women with their "changeable minds, who in their lightness think only of the present." *Ibid.,* p.8. I advance a discussion of such a feminised space in the following chapter.
[220] See for example Mellamphy, '(ᵂ)omen out/of Time', where she focusses on the three female figures of Kali, Medea and Mètis and their *mètis* way of being, threatening male Western patriarchy.
[221] Detienne and Vernant, p.32.

to understandings of the human subject that has led to their total omission from our discussions of intelligence. Their mind as a distributed, tactile and mimetic cognitive mass radically threatens human notions of individuality and our framed experience of space, time and vision.

Roger Caillois describes mimesis not to be a survival strategy of insects, but instead a sort of anti-utilitarian "dangerous luxury."[222] Entailing a loss of energy and at times even death itself[223], mimicry is instead a "veritable lure of space" as the animal in fact becomes *"assimilated into the environment."*[224] Both space and vision become haptic as bodies interact with their surroundings, at once perceiving *and* inhabiting space. What one sees (or feels) becomes what one is, the porous body leaks out into its surroundings and the surroundings permeate the body. The eye and the body become one, inside and outside collapse, and perception and action coalesce. For Parrika, this materiality of vision underlines a "fundamental shift in the understanding of matter in general" and for my research, the collapse of depth here, as space and self become one, is the most interesting concept.[225] However, I reverse Caillois's discussion to instead suggest that it is not the octopus who is lured by space and depersonalised by an assimilation into its environment. Rather, the mimetic and engulfing form and capacities of octopuses – made clear in both Painlevé and Hamon's film and Flusser and Bec's text – enable these animals to actually become the very space that so threatens personhood.

Their treacly ink and indiscernible bodies recreate Caillois' "thick" and "dark space" to which bodies and "the self [are] *permeable"* and can expire within. Within the octopus world *"life withdraws to a lesser state"* via a "*depersonalisation through assimilation into space*". Personality and vitality are lost and "a process whereby *space is generalised*" occurs.[226] As humans watch an octopus in its habitat, life and environment condense and we can no longer be sure what we are looking at or if we are where we think we are. For a species who pride themselves on our individuality and discrete selves, this experience cannot be tolerated. It returns us to an "original insensate condition and prenatal unconsciousness" similar to what Caillois calls "*legendary psychasthenia.*"[227] Unlike the octopus who feels where she is to know where she is and becomes a part of where she is, this psychotic experience evokes an uncanny situation of "*I know where I am,*

[222] Roger Caillois, 'Mimicry and Legendary Psychasthenia' in *Caillois Reader*, pp.91-103, p.97.
[223] Caillois provides the example of the "wretched Phyllidae" (a family of leaf insects whose name he has misspelt – *Phylliidae*) who end up literally grazing on one another, mistaking other Phylliidae for real leaves. Resulting in "some sort of collective masochism culminating in mutual homophagy – with the imitation of the lead serving as an *incitement* to cannibalism in this particular totemic feast." *Ibid.*
[224] *Ibid.,* pp.98-9.
[225] Parrika, p.98.
[226] Caillois, 'Mimicry', pp.99-101.
[227] *Ibid.,* pp.100-103.

but I don't feel that I am where I am."[228] Identity merges with one's surroundings so any sense of self can no longer be grasped. All that can be felt is space.

Octopus bodies threaten us physically, their groping arms and viscous ink able to engulf our frames of reference. Their bodies too can disappear into their surroundings, confounding our vision and confusing our sense of background and foreground. Unlike Caillois' "wretched" *Phylliidae* who erroneously lose themselves in space through mimicry, octopus mimesis retains its agency and in so doing threatens those it encounters (visually and spatially) with *the veritable lure of its own space*. The octopus allures us into its inverted world, sucking us into its centripetal vortex from which no escape is possible. She transports us back to a time before thought, before rationality, before language and before knowability, to a depersonalised and prenatal unconscious that we struggle to repress.

The Spatial Capture of Fragmentation

Lacan's theory 'The Mirror Stage as Formative of the *I* Function' describes the important encounter between an infant of about eighteen months and its reflection. As outlined in my introduction, the child comes to recognise, and *assume* this specular image. This stage represents a fundamental moment in the structure of subjectivity (the formation of the ego or "*I* function") and is set "at odds with any philosophy directly stemming from the *cogito*."[229] Through a series of disjunctions and misrecognitions the human infant succumbs to the "spatial capture" of the mirror image and assimilates himself into the space of this illusion.[230] Fragmentation is abandoned in favour of an imaginary world of control and cohesion. Inside and outside are separated but this boundary will forever be plagued by a discordance and instability that cannot be forgotten. The human identity is left alienated from itself, split in two and haunted by this violent division.

The process by which the ego is formed in 'The Mirror Stage' is founded upon a relationality to otherness – one's reflection or the maternal prop – that is at once recognised and feared, causing an experience of aggressive alienation. This alienation is balanced by narcissistic attraction. The subject experiences at once the threat of disintegration and a fascination for his own reflection.[231] Captured by this image a human infant will thereafter spend their life in pursuit of a reconciliation of their reality and "the fictional image of coherence that the mirror and its reflecting substitutes

[228] *Ibid.*, p.100.
[229] Lacan, p.75. Lacan, unlike philosophers following Descartes, believes that subjectivity is structured not by consciousness or rationality but by the ego, which comes into formation only after one identifies with one's reflection. The ego is a relation rather than a self-identical substance.
[230] Lacan, p.77. I assume the gender of the child to be "he" here following Lacan's own patriarchal words.
[231] Dylan Evans, *An Introductory Dictionary of Lacanian Psychoanalysis* (London: Routledge, 1996), p.120.

promises." Yet this pursuit is made in vain, never to be reconciled. For Vicki Kirby writing for *philoSOPHIA,* "the motor of subjectivity is misrecognition because the human subject is incapable of perceiving an unmediated world." Upon entry into the imaginary and symbolic realms, the world becomes an uncanny "*self* reflection of sorts" and there "can be no gesture of unifying resolution."[232] Because the "ego identity" is forged in discordant relation to the specular image, "the stability of the subject's 'being itself'" is impossible. "Nothing is given or straightforwardly self-present because the process of identification is an inherently dynamic one."[233] Through his aggregation of competing corporeal sensations and perceptions as well as a "battery of perspectives and motives" Lacan's 'Mirror Stage' becomes a "surreality – whose interpretive irresolutions and compromises we attribute to the workings of mind, culture or the social – the 'Functional *I*'".[234] As in Painlevé and Hamon's film, where the unrepresentability of the octopus is emphasised through the interfering juxtapositions of the narration, the soundtrack, the magnification and the editing of frames, Lacan's theory emphasises the conglomeration of perspectives and interferences that bring about the irreconcilable reality of the human 'I'.

Looking in the mirror, the infant experiences himself as both here and there, he knows where he is, but he doesn't feel that he is where he is. The animal who instead abandons the vacuity of their reflection, never to enter Lacan's order of the imaginary, remains in reality. Animals never experience this existential paradox. Yet humans, whose identity is subject to and dependent upon a "myriad of external forces" and mediations, forever grapple with their experience of reality and self, constantly divided across lived experience and their imaginary and symbolic representations.[235] The signs and symbols of language interfere with and dictate our experience yet remain outside of our control. Animals do not suffer the hindrances of representation and so are more grounded and in touch with the true nature of their reality than humans ever could be. They live an existence we can only envy as we narcissistically view the world through the prisms of the imaginary and the symbolic (language) and more recently our technological prostheses. Lacan himself claims that what he tried to convey with 'The Mirror Stage' was that "the image of [Man's] body is the principle of every unity he perceives in objects … all the objects of his world are always structured around the wandering shadow of his own ego."[236] We are forever distanced from the world and instead live in a cultural construction that serves only to reflect ourselves. On the contrary, octopuses reflect the world around them and maintain a sense-able grasp on their surroundings which threatens us with its transformative and evasive capacity.

[232] Vicki Kirby, 'Originary Humanity' in *philoSOPHIA,* vol.8, issue 1, (June 2018), pp.43-60, pp.47-8.
[233] *Ibid.*, p.49.
[234] *Ibid.*, p.48.
[235] *Ibid.*
[236] Lacan, quoted in Butler, *Bodies*, p.45.

For the human subject, self and non-self remain forever in relation, so true subjectivity remains untenable. Identification with oneself and one's surroundings can only be achieved through degrees of separation. Self-division persists, and misrecognition comes to characterise the ego in all its structures. Lacan demonstrates the inevitable delusions of (human) consciousness as it apprehends reality. Due to the idealisation of this identification, the relationship between the subject and the image is presented as fundamentally narcissistic and accompanied by an instability. 'The Mirror Stage' as a process of "psychic projection implies that the sense of one's body is not (only) achieved through differentiating from another (the maternal body)" reminds Judith Butler, "but that any sense of bodily contour, as projected, is articulated through a necessary self-division and self-estrangement."[237] The self is not discrete nor autonomous but in constant relation with the fragmented other that lies deep inside at all times.

We see the infant deceived and lured by the imaginary of surface appearances. Superficial illusions of wholeness and autonomy mask the underlying experience of fragmentation and discordance. For Lacan "the subject" is "originally an inchoate collection of desires" with this sense of fragmented disunity threatening the illusion of synthesis which constitutes the ego.[238] The child, captivated and captured by this image of stability becomes imprisoned within a series of static fixations.[239] For Butler, writing with political motivations on gender theory, Lacan's mirror does not show a self-reflection, the ego itself not being a self-identical substance, but a "sedimented history of imaginary relations" locating the centre of the ego outside of itself. The ego is only a reflection of what it sees and encounters in the cultural imaginary of the human world.[240]

Lacan's mirror "provides a *frame,* the boundary, the spatial delineation for the projective elaboration of the ego itself."[241] The visual integrity and sense of control provided by the mirror compensate for the lived experience of fragmentation, disunity and discoordination.[242] The ego will forever remain outside of the subject as an other, and this "temporal *ek-stasis*" means true identification with reality and the "self" can never be achieved. There is no innate centred "self"; the ego and the subject can never be resolved. The ego will forever tend toward the impossible promise of a future synthesis of itself, of its inside and outside, of its body and mind. Alienation becomes the constitutive feature of human subjectivity – alienated from themselves, their surroundings, their animal pasts and their true experience of the world. The human subject is left in interminable formation through this uneasy relationship. Ours is "a body in pieces" which can only be described

[237] Butler, p.40.
[238] Evans, p.67.
[239] *Ibid.*, p.83.
[240] Butler, p.43.
[241] *Ibid*.
[242] *Ibid.*

through negation.[243] Butler's reading here reflects the processual nature of Painlevé and Hamon's film as it tries to grasp the reality of an octopus world. Another body in pieces, the octopus evades our visual grasp and can only ever be viewed in negation – engulfing or dissolving into the background. The life of the octopus seems to uncannily reflect our own non-constituted existence, but at the same time undermines this belief as we see it mutually enfold with its surroundings.

Lacan's originary human subject in 'The Mirror Stage' – one that is abandoned in favour of the illusions reflected by the mirror – shares a fragmented, discordant, and ek-static existence, much like the lives of the octopuses I have explored in this chapter. Flusser and Bec argue that when humans and octopuses meet, humans encounter their most radical other – the most evil and repressed characteristics rising from hell which threatens the dissolution of binaries and distinctions between right and wrong. I however argue that when humans encounter octopuses, we are not faced with our most inverted and abhorred personality traits. Instead what we meet is our "primordial" infant selves materialised in space.[244] The distributed and alluring body of the octopus engulfs the gaze of a human viewer and returns us to our watery animal pasts – prior to entry into the symbolic realm and thus left without language.[245] This frameless reality is the most threatening. Humans name animals as different from themselves so as to gain control over them and diminish their threat. Yet the octopus reminds us of a time and space when we did not possess these naming and othering capacities. The octopus represents our most vulnerable moments in life when we were not "world-forming" nor meaning-makers.[246] These animals enforce the fact of the hopeless pursuit of unity and synthesis which humans follow – our "alienating [pre-]destination" as we grapple with reality and our limited perceptions of it.[247]

Octopuses assimilate themselves with space, mimicking their environments and engulfing those they encounter.[248] 'The Mirror Stage' too is a manifestation of "spatial capture" whereby the human infant recognises the "organic inadequacy of his natural reality" and assumes and appropriates the space of the imago.[249] The (inferior) monkey gains control over this alluring space

[243] Butler, pp.44 and 47. Jacques Derrida argues in *The Animal That Therefore I Am* that animals are constituted by humans only through their lacking – of language, a face, capacities to grieve, mourn and lie – yet here we see the human identity embody this space of incessant negation. For Derrida, what animals in fact lack is "precisely the lack by virtue of which the human becomes subject of the signifier, a subject subjected to the signifier upon entry into the symbolic order", p.130.

[244] Lacan, p.76.

[245] Even a foetus developing in the womb lives a life underwater floating in the amniotic sac, this too being a life without words, precariously close to the primordial past we once shared with all animal species.

[246] Heidegger describes humans as "world-forming", stones as "worldless" and animals as "poor-in-world."

[247] Lacan, p.76.

[248] Like African grey parrots, octopuses fail the more recent mirror test for consciousness, yet they can use visual information to direct themselves in space and can distinguish between two humans. Jennifer Mather wonders whether their vision might be other- rather than self-directed, p.6.

[249] Lacan, p.77.

and discards it, enabling the future cohesion of his natural form and reality. The gullible child however is captivated by this image, entranced by its deception. Like Caillois' mimetic insects, the infant is allured by space, assimilates himself into it and left forever alienated from his own identity and lived experience. He will never be able to consolidate where he thinks he is and where he feels he is. The octopus, on the other hand, embodies this consolidation and for this reason, becomes our most threatening other.

I suggest humans always know where they are – they use language to construct and name their world, making it knowable *on their own terms*. But they are forever hindered by this imaginary and symbolic existence which uncannily severs them from the real lived experience that animals have. They cannot feel where they are. There is forever a discordance between what they feel and what they think – what lies beneath their linguistic and cultural shades. It takes one look at an octopus to assert to us the limits of our horizon and the potentials to go beyond it. Octopuses' embodied cognition and mimetic capabilities remind us at once of our repressed childhood pasts (as formulated by Lacan) and our incessant inability to consolidate our egos with our lived, subjective experience. They might be frightening and physically threatening, but I read in the distributed cognitive bodies of octopuses – a body of thinking matter with a sense-able grasp on the world – a space of alluring alienation that reminds the human psyche of the artificiality of human meaning-making.

The human mind is not quite as coherent as we like to believe. Octopuses embody another way of life, a shared evolutionary and aquatic history before language enforced its signs and symbols onto us. They threaten to suck us back into that vortex of unknowability. They haunt us with their fragmented space that interrupts the belief that reality is as we see it and speak it, and that whole other ways of world-forming abound which shatter the human illusions of total knowability and control of our environments. Perhaps our empathy for octopuses might evolve if we un-framed our own experience and sought to consider our spaces of limitation from new perspectives which invert the knowledges we have so far acquired?

Chapter 2. The Dangerous Alliance of Women and Insects

Uncanny Reflections

Insects are some of our most distant others. Yet they uncannily mirror human traits – sexually and socially – on a minuscule scale and with an eerie twist. In this chapter, I investigate literary and visual representations of insects to explore some of the different readings of, and how these readings reflect, human behaviours and the narcissistic gaze that humans project onto the world around them. Whether this be the industrialisation and anonymisation of male workers in feminised societies, the voracious sexual appetite of the praying mantis or the reproductive egg-laying machines of queen ants, bees and termites, our own strengths, weaknesses, fears and desires are reflected back from these tiny forms. I begin with an analysis of the patriarchal pairing of Women and Nature to consider how a typically derogatory association could in fact be reclaimed to assert the agency of both sides – specifically women and insects here – to create a dangerous object in its own right. Women have been seen as more instinctual, emotional and irrational, so thus "further down the great chain of being that has rational males at its peak" and more closely aligned with animals and insects in patriarchal discourse.[250] Such alliances normally remain *unvisualised*, without agency and merely grouped linguistically – Othered – in human culture founded upon alienation and domination. However, I consider how the women/insect alliance becomes threatening when it is imagined outside of patriarchal structures which depend upon binary oppositions. When positioned in a type of generalised space – an *unrational* space – where dialectical relations dissolve, women and insects are no longer opposed to their other – man/culture/rationality – and instead, form a comradery permeated with agency. It seems we need to find new frames to be able to visualise mechanisms patriarchy normally blinds us to. I establish such frames to allow the alliance of women and insects to interrupt reality in unspeakable ways.

I move on to Roger Caillois's theories on mimicry which Jacques Lacan references in 'The Mirror Stage', to develop the idea of space as an engulfing threat to the human subjective experience. Challenging Descartes's famous words "I think therefore I am", space can in fact devour forms via mimicry, causing a dissociation of body and mind.[251] Agency and personhood are dispossessed in a way Caillois can only liken in the human realm to extreme schizophrenia.[252] I apply this analysis to the contemporary art practice of Pierre Huyghe whose work with bees in his

[250] Charlotte Sleigh, 'Inside Out: The Unsettling Nature of Insects' in *Insect Poetics,* ed. by Eric C. Brown (Minneapolis: University of Minnesota Press, 2006), pp.281-297, p.288.
[251] That is "*Cogito ergo* sum" attributed to René Descartes (1637).
[252] Hal Foster, *The Return of the Real* (Cambridge Ma.: The MIT Press, 1996), p.164.

installation *Untilled* (2011-2) explores the tenuous, slippery and fragile distinctions of nature and culture and human and animal, whilst expanding typical understandings of what art can be. Despite our insistent distinction from insects, scientific fact and artistic exploration remind us that the human-animal boundary is not as impermeable as traditionally believed. Humans uncannily see themselves reflected in the lives of these tiny creatures, and now, more than ever, with ecological devastation and colony collapse well on the way, these ambiguous pollinators become crucial to humanity's survival. I argue that if Man was not the measure of all things, alternative power structures and ways of being – as figured in women and insects – might be positioned as threatening not only in relation to male power rooted in the phallus. I demonstrate how these dangerous objects might be even more threatening when considered outside of patriarchal discourse, in a realm where masculinity barely makes an appearance.

Othering Women and Nature

Traditionally within patriarchal and anthropocentric discourse, Women and Nature are often homogenised together, in opposition to rational Man and culture. The violence of this grouping not only risks erasure of the values and issues within the two identities (such as race, sexuality, species, living and not) but others both Women and Nature as Man's negative and alienates each from the cultural and rational sphere. Women and nature are conceptualised as compromising to male identity, the cunning and seductive Other threatening to lead Man astray through an overwhelming instinct to procreate.[253] In light of the rise of ecofeminism in the 1970s, this positioning of women and nature as a threat to be controlled and avoided has been re-envisioned. These ecofeminists try to reclaim the pairing of femininity with the natural, in efforts to establish an environmentalist discourse in light of increasing threats to the planet. Glorifying the natural world as "Mother Earth", a caring and nurturing provider in need of respect and protection from patriarchal capitalism, they challenge the positioning of both women and nature to be dominated and exploited by masculine culture. However, despite the earnest intentions of this comradery, the negative implications of additional discrimination and threat to both women and nature remain inevitable. Identities are homogenised within this alliance, an alliance that exists in vulnerable opposition to male power.

This glorification of the purity of the natural world also plays into the hands of patriarchal discourses, paradoxically repositioning both women and nature as victims in need of a masculine, rational, cultural saviour. Stacey Alaimo argues in her paper 'Cyborg and Ecofeminist Interventions: Challenges for an Environmental Feminism' that this alliance risks situating environmental problem

[253] This identity can be traced back to the biblical story of *Genesis* where the serpent and Eve conspire to lead Adam astray, enticing him to eat from the tree of knowledge and thus bring about the fall from innocence.

solving as "'women's work'" "leaving capitalist America free to *mind its own business*."[254] Ideologies about women as emotional (rather than rational), nurturing (rather than providing) and confined to housework (rather than business) are reinforced and the repression and negation of both women and nature is reconfirmed. Ecofeminist Carolyn Merchant argues that "[b]oth [women and nature] need to be liberated from the anthropomorphic and stereotypic labels that degrade the serious underlying issues."[255] Neither nature (and all that word encompasses) nor women (and all that word encompasses) are granted an identity or agency in themselves but positioned well and truly in relation to and dependent upon their opposite, masculinity. Alternative ways of envisioning the feminine and the natural which asserts the wealth of meanings contained within these two ways of being, without violently encasing them in that human construction language, is needed. I propose a certain space of devouring eroticism through this unusual alliance, which allows the reconfiguration of both female and insect agency outside of any gender dialectic.

Cyborg Narratives

Alaimo compares the initial goals of ecofeminism, as it would later evolve into a more complex coupling of women and nature, to Donna Haraway's 1984 text 'A Cyborg Manifesto'. Emerging in the context of Cold War technoscience, this is "the illegitimate offspring of militarism and patriarchal capitalism, not to mention state socialism." Haraway's feminism reconfigures the violent grouping of women and nature by radically blurring the lines between animals, humans and technology. This cyborgian ontology challenges the "escalating domination of woman/nature" by man/culture by placing great emphasis on the artificiality of bodies.[256] Haraway calls for "an appreciation for the constructed, artefactual, historically contingent nature of simians, cyborgs and women" to consider how to "demonstrate another mode of signification."[257] Her theory of artefactualism challenges beliefs in the concept of an essential or pure nature, existing somewhere 'out there' for human appropriation. Rather, nature is cast as an active agent, complicit in its "co-construction among humans and non-humans."[258] In this narrative, "[w]e are all chimeras, theorized and fabricated hybrids of machine and organism; in short, we are cyborgs." Haraway destabilises any

[254]Alaimo writes of the risks of "depoliticising the environmental movement", "when the potential for ecologically conscious consumerism to save the planet is limited." We continue to see this happening now as the onus of 'saving the planet' is increasingly placed on individuals through recycling, flying less, shopping 'sustainably' rather than on the large corporations and capitalist industries mostly to blame, pp.137 and 138.
[255] Carolyn Merchant quoted in *Ibid.*, p.136.
[256] Haraway, *Simians,* p.151.
[257] *Ibid*, p.4.
[258] Haraway quoted in Alaimo, p.145.

and all ontological categories deemed 'natural' to open up the possibility for new figurations, assemblages and narratives.[259]

By casting nature as an "active agent" rather than an "ahistorical passive resource for human domination", Haraway defies the typical positioning of nature as an object to be exploited by the human subject, and casts it instead as "a historical actor, nature interacts with human beings through mutual ecological relations."[260] Through her "critical positioning" Haraway allows for the emergence of narratives that are not typically voiced. She asserts the need for "situated knowledges" that allow fragmented histories to sit together.[261] The boundaries between nature, culture, humans, animals and technology are reconfigured and instead, bodies and narratives intertwine and entangle in interdependence and co-creation. Countering what she calls the "dialectic of apocalypse" between the "One" and "the other", Haraway instead emphasises that "to be other is to be multiple, without clear boundary, frayed, insubstantial."[262] Ideas about the individual human subject are shattered as she suggests that we are all in relation to what had previously been named other. Haraway's goal is to find alternative potentialities – in contrast to dominant patriarchal, capitalist and anthropocentric narratives rooted in male power – through her suggestion of surprising couplings and affinities not normally figured, such as animals with technology or humans with animals.

However, as Alaimo points out, "cyborgs forsake alliances between women and nature and may bolster a destructive technophilia."[263] By envisioning machines, animals and humans as one ontology, not only do women and nature give up their traditional comradery, they also face co-optation into alternative patriarchal narratives around "phallotechnology". When envisioning machines as part of us, cases of masculine "phallus worship" may propel technologies of destruction argues Alaimo. Although Haraway's post-Cold War argument – developed in a context of increased nuclear threat – aims to make machines appear less threatening, more controllable and less other, an erotics of masculine power is still rife to emerge in our current culture of patriarchy, masculinity and domination.[264] Haraway's vision is at risk of being subsumed back into patriarchal discussions that group masculinity, technology and power through the symbol of the phallus.

Alaimo concludes her paper with questions as to whether it is possible to construct female alliances with nature "that don't mystify nature or pose women as essentially victims or

[259] Haraway, *Simians,* p.150.
[260] Alaimo, p.145.
[261] Haraway, *Simians*, p.188
[262] *Ibid.,* p.177.
[263] Alaimo, p.133.
[264] *Ibid.*, pp.147-8.

mothers?"[265] Similarly, is it possible to construct alliances of women and nature that allow both sides to reclaim technology without leaving a risk of male re-appropriation? Can an alternative epistemology be imagined that grants women and nature independent and political agencies that not only escapes but even reclaims and threatens patriarchal logic? Rather than passively positioning the pair in mutual struggle, might it be more successful to intentionally imagine the radical interruptions these identities combined are capable of when no longer appropriated within masculinist discourse? I turn now to the (deadly) eroticism of insects, unapologetically *sexy females*, to explore how such an epistemology might creep into the frame and bite back.

Threatening Matriarchies

I begin my analysis with the "erotic entomology" of Jules Michelet (1798-1874) and Maurice Maeterlinck (1862-1949), two literary figures who were unable to avert their gaze from the alluring yet alienating worlds of insects.[266] French historian Michelet lays great emphasis on their sexual behaviours in his book *The Insect* (1858). His descriptions of insect life shed new light on the complex and subversive relations between these tiny creatures. His voice and view from nowhere describes the ceremonies and rituals of insects – the "wedding garments of ants, the wings which they wear for the moment of love" or the "industrial attire, [and] velvety coat" of bees.[267] Michelet reads human behaviours across these creatures, anthropomorphically projecting and encasing their forms within our words and customs. The non-innocence of language prevails as he clumsily applies human concepts and constructions to the insect world. We are left wondering what we might learn about insects if human language did not always cloud our readings and human behaviour was not the axis of interpretation for the world.

Belgian poet Maurice Maeterlinck follows a similar approach in his three texts *The Life of the Bee* (1901), *The Life of the White Ant* (1926) – also known as *The Life of Termites* – and *The Life of the Ant* (1930). Maeterlinck relies on exhaustive scientific reading alongside personal observation to maintain a strong thread of fact in his writing amidst clear awe and admiration for the insects themselves.[268] He identifies "the spirit of the hive" as "a curious logic that cannot be pinpointed to any specific role, order or function" but ensures total harmonisation of the individual bees' actions

[265] *Ibid.*, p.149.
[266] Adeline Rother, 'Becoming Zoö-curious: Reading Sexual Differences in the Field of Animal Life' in *HUMaNIMALIA,* 8:2, vol. 8, no.2, (Spring 2017), pp.87-107, p.87.
[267] Jules Michelet, *The Insect,* (Milton Keynes: Lightning Source UK Ltd., 2012), paras.272 and 297.
[268] Hailed as the "Belgian Shakespeare" Maeterlinck enjoyed beekeeping as a hobby and so infused his creative writing with personal observation to secure the validity of his entomological study. Edwin Way Teale, 'Introduction' in Maurice Maeterlinck, *The Life of the Bee,* trans. by Alfred Sutro, (NY: Dover Publications Inc., 2006), v-xi, v-vi.

so "that they can exist as a collective." For Maeterlinck this "intuition 'passes the limit of human morality.'"[269] He continually draws didactic comparisons between human and insect life, comparisons he strives to project as positive but inevitably have their own pitfalls.

Maeterlinck describes how "the civilisation of the white ant precedes by a hundred million years the appearance of man on our planet" making them "the most logical and best fitted [living beings] to the difficulties of existence."[270] His three texts emphasise and praise the utilitarian capacities of insects, most clearly displayed in their elaborate nests, social organisations and "almost human adaptability to circumstance."[271] Maeterlinck makes use of philosophical analogies between humans and social insects to suggest a sense of kinship between these three orders – ants, termites and bees – and mankind, as well as a morality and even superiority of these insects, often labelled automatons, *above* humans. He embellishes his words and their worlds with a poetic allure which not only anthropomorphically clouds our view of these insects but overshadows the underlying experience of threat and alienation from these most radical of others.

In *The Life of the Bee,* Maeterlinck recalls how his predecessor, Dutch biologist Jan Swammerdam, through the aid of the microscope, dissected the bees to unearth a remarkable discovery. "[T]he ovaries and the oviduct definitely fixed the sex of the queen hitherto looked upon as a king" throwing the whole political scheme of the hive "into a most unexpected light by basing it upon maternity."[272] Beyond his praise for their efficiency and effectivity, Maeterlinck's texts are infused with degrees of intrigue and threat for these radical *matriarchies*. After Swammerdam's confirmation that beehives (as well as termitaries and formicaries) are overwhelmingly female, the human (male) gaze upon these worlds cannot help being tainted. Following Maeterlinck's identification of certain degrees of kinship between humans and insects, their overtly feminised worlds introduce a possibility of doom or threat for humanity.[273] Michelet also sees within these maternal republics a "deliberate and intelligent *sacrifice* to an idea or instinct […] a sacrifice that is without limit and almost infinite" that is not made to their queens, nor to any individual, but instead to the future, to the destiny and propagation of their kind. "The sentiment displayed towards the queen is not so much of a personal character as the idea of utility, of the people which very visibly prevails."[274] With their ruthless treatment of queens, "imprisoned" at the centre of the colonies without freedom nor control, and the merciless replacement of them once their egg-laying abilities fail, insects re-enact the male fear of a feminised society mindlessly preoccupied with its own

[269] Maeterlinck, *Bee*, quoted in Parrika, p.49.
[270] Maurice Maeterlinck, *The Life of the White Ant,* trans. by Alfred Sutro, (London: George Allen & Unwin Ltd., 1927), pp.17-18.
[271] *Ibid.,* p.50.
[272] Maeterlinck, *Bee,* p.3.
[273] Sleigh, p.289.
[274] Michelet, para.325.

reproduction. Maeterlinck sees how these perfect social organisations are created at the inconceivable costs of coprophagy[275] and male castration.[276] Individuality is replaced with sociability in alarming circumstances. Maeterlinck and Michelet may search for meaning, morality and kinship within insect worlds, but their human frames of reference inevitably infuse these matriarchies with an underlying menace which threatens the power of their human patriarchy.

The goal of the hive is the maintenance and security of reproduction, woman's only goal childbirth, and the husband as "first and foremost the instrument of procreation."[277] "A secondary accident", "abortion" and "caricature of an insect", the male for Michelet is a superfluous cog in the great machine of female reproduction, their sex even at times atrophied for the sake of industrial efficiency. Maeterlinck vividly portrays the image of the queen termite as "merely a gigantic belly, crammed to bursting-point with eggs" whereas "the king – or let us call him the prince-consort – is shabby, undersized, puny, fearful, furtive, and always in hiding underneath the queen."[278] Maeterlinck echoes his contemporary preoccupations with the feminisation of society in light of psychoanalytic theory and post-war industrialisation. Charlotte Sleigh explains how total war seemed to have "robbed men of their individuality and compromised their masculinity by making them weak" leaving them "forced to take their place in the great machine of industrial society."[279]

Modern society after the war and subsequent industrialisation now defined "by its passive, deindividualized citizens, was forever restricted within the feminine mold" of reproduction rather than innovation. A threat to "scientific and artistic autonomy" arose out of the "new, mass, feminised culture. Its imago was a mother-machine."[280] Sleigh cites psychoanalyst Carl Jung's description of the hypertrophy of the maternal element "'driven by a ruthless will to power and a fanatical insistence on their own maternal rights, they often succeed in annihilating not only their own personality but also the personal lives of [their] children.'" The mother/social insect becomes a "hapless victim of her instincts" and a "robot of reproduction" with a voracious (sexual) appetite.[281] Rational decision making and creative innovation are overwhelmed by the overpowering instinct to reproduce. Insects and women are violently coupled as mindless maternal figures here,

[275] The eating of faeces or dung, this becomes the most flagrant reversal of inside out, Sleigh p.294. Maeterlinck sees in termitaries "a communism of the oesophagus and bowels, the workers alone able to eat and digest cellulose." In the case of wood scarcity, Maeterlinck observes how "the very walls of [the termitary] provides, as in fairy tales, nourishment required; for they are made of excrement eminently eatable." *White Ant,* pp.71 and 48.

[276] Voluntary castration takes place with termite workers' sex "atrophied and hardly differentiated", Maeterlinck, *White Ant,* pp. 68-9.

[277] Sleigh, p.290.

[278] Maeterlinck, *White Ant,* p.99 The queen can lay up to 80,000 eggs a day and "grow 2000 times larger than her natural condition although by hideous contrast her head does not increase," p.48.

[279] Sleigh, p.293.

[280] *Ibid.*

[281] Carl Jung quoted in Sleigh, p.291.

dehumanised and automatized as threats to male virility, creativity and autonomy. As the female workforce rose, men employed alongside women in anonymous jobs felt demasculinised, needed only for their mechanical fertilisation. Male power at work and at home was threatened by the female machine overpowering anything standing in her way. The need for patriarchy was asserted in order to fight this reproductive power. Men experiencing themselves as automatons reclaimed their subjectivity by casting women as the mother machines seen in insect colonies. Women were thus alienated from the masculine human sphere to the nonhuman realm of insects and automatons. This violent coupling being a patriarchal tactic to suppress both female and insect agency and threat through negative words and associations, this relationship in fact gains its own force when repositioned in feminist discourse.

As humanity gets closer to insects, contradictions are revealed to challenge the stories patriarchal society tells itself to assert exceptionalism over the world. The beehive uncannily warps a familiar structure of social organisation and coordination by placing at its head the typically subordinate female. Not only this but investigation into insect sexuality and kinship casts serious doubts and fears upon human heterosexuality. Males are sacrificed for the sake of female pleasure and propagation to become superfluous, perfunctory, self-surrendering "accidents" describes Michelet.[282] Within the beehive, the caste of the adult insect's gender is determined by whether the egg is fertilised or not (male drones hatch from unfertilised eggs), what the larvae are fed (queens only are fed on "the royal jelly"[283], never nectar or pollen like the female workers) which demonstrates an unnerving level of control upon biological determination and organisational strategy, as well as the trivial importance of the male phallus. Reproduction lies firmly in the hands of the women. Eggs hatch into larvae that then undergo metamorphosis to enter the world fully-developed.[284] The perfect form of the insect-body suggests its ability to repeat endlessly like a machine, thus evading our exclusively human need for technology and language.[285] Unlike human bodies that depend on maternal care for years and technology for lifetimes, these insects display a threatening independence. If all our inventions are made to protect our own deficiencies, "can we declare [insects] any less intelligent than us?" Maeterlinck asks.[286] He adds, "all our machines are merely organic projections, unconscious imitations of models supplied by nature."[287] Although humans prize ourselves on our intelligence often manifested in tool-use, these tools invariably are

[282] Michelet, para. 343.
[283] A special nourishment capable of transforming larvae into royal nymphs, Maeterlinck, *Bee*, p.31.
[284] Through their capacities for metamorphosis, insects become figures of fantastical transformation, development and change, defying human concepts of temporality, individuated selfhood (space) and identity itself. See 'Prelude' for more discussion of metamorphosis.
[285] Lynn Turner, 'Insect Asides', in *The Animal Question* ed. by Turner, pp.54-69, p.63.
[286] Maeterlinck, *White Ant,* p.175.
[287] *Ibid.,* p.183.

inspired by the feats and wonders of the natural world and are only necessary due to our own shaky and vulnerable self-positioning at the top of the animal hierarchy. Insects subvert the mind over matter distinction, their very bodies becoming the tools that we invent with our intellect. Human rationality holds no meaning in insect worlds which thrive on the *feminine instinct to procreate*. A new mode of looking at insects is needed in order to appreciate their radical capabilities on their own terms.

The feminisation of insects is witnessed by male entomologists and male psychoanalysts as foreboding, an irrational maternal force threatening the autonomy of rationality and patriarchy. However, I prefer to align women and insects not as mothers, but as sexual beings, imagining an epistemology of eroticism and desire that usurps masculinity in pursuit of female pleasure. Within beehives, formicaries and termitaries, masculinity is not placed in opposition to femininity. Rather, it is a perfunctory utilitarian presence, solely at the service of female propagation. This positioning of the genders radically defies human constructions which place women (and animals) in the service of men. However, if humans were to abandon their linguistic and discursive frames when looking at insect worlds, none of these concepts would exist. The maternal threat of the hive would be liberated from its encasement in human projections and able to express its own function, beauty and expressivity without fear of mistranslation. And perhaps this idea is what human constructions find the most threatening – the fact that their words and meanings become irrelevant (like the male bees) when extended beyond the human realm. When words can no longer be applied to something other, that other is left as the most unknowable and thus the most threatening of others. Instead of imagining a maternal republic which can be reclaimed by patriarchal control, might we instead consider these reproductive machines as sexually charged individuals in pursuit of their own desires and satisfactions? When looking at animals, language inevitably fails us, so might it not be more interesting to expand our frames of reference to accommodate alternative possibilities and meanings beyond the most obvious? I turn to the artwork of Pierre Huyghe to visualise such an expansion.

The Women/Insect Alliance

French artist Pierre Huyghe (b.1962) creates artworks which do not depend on a viewing human subject. He challenges artworld norms by allowing his works free reign to evolve and mutate unpredictably out of contingency. He places together organisms, technologies and artefacts which do not appear to have any relation to one another in chance encounters. Once the stage is set, Huyghe steps back, having engineered interactions and meanings to evolve between and across the

juxtaposing elements. In so doing, the artist establishes new grounds for perspectives from which human viewers can approach his work. These are nonhuman dependant scenarios which venture into worlds not confined to the human *Umwelt*.[288] Animal sense such as the hive mind of bees or the olfactory world of dogs encountered in his installation *Untilled* at dOCUMENTA (13), typically inaccessible to the human experience and outside of the artworld context, now take centre stage.

Huyghe taps into the irrational and surprise elements of life on Earth to emphasise the limits of human perception and experience and propose ways of seeing and being that human sense does not normally allow. Through his interest in "un-telling" he breaks down traditional conceptions of (human) knowledge and instead proposes "rough" improvisational knowledge and the potential for new languages and experiences to emerge.[289] His works become what the artist calls *no-knowledge zones* "unexhausted" and "unchartered" realms with the potential for new experiences.[290] Human viewers enter a depersonalised space where human dualisms can no longer exist. They are allured by this (in)difference and simultaneously alienated. Such spaces are therefore to me, the most interesting for re-imagining the normally negative coupling of women and insects.

Untilled was an eclectic ecosystem, hybridising species to strange effect (figure 21). Located in a compost heap on the outskirts of Karlsaue park, this was a world outside of typical human understandings of culture and rationality. Organic identity replaced logical identity and all manner of forms lived in coexistence. Huyghe fashioned a home for a white Ibizan hound (named Human) with one leg painted pink, who roamed the compost heap of flowers, fungi and ants performing myrmecochory.[291] Amidst this world of unrationality, the human subject struggles to position themselves, and must instead shed any preconceptions about meaning and order in the world before entry into this space.

Another component within this system was a beehive at work to pollinate flowers and produce honey. This was placed atop of a statue of a reclining female nude, uncannily replacing her head – later named *Untilled (Leigender Frauenakt)* [*Reclining Nude*]. This neoclassical bronze, originally cast by twentieth century sculptor Max Weber[292], is "distorted and rendered acephalic by the disconcerting colonisation of the head by the hive" writes Amanda Boetzkes.[293] However, in my reading, this hybrid figure visualises the dangerous alliance of women and insects as sexual beings, enabling the cultivation of alternative possibilities to the ones that patriarchy enforces. Once more masculinity is threatened with *automaticity* in this world – a male "caretaker" with a disconcerting

[288] See Uexküll and my introduction for further discussion of his work.
[289] Molly Nesbitt, 'Two Moons Rise' in *Robert Lehman Lectures on Contemporary Art,* ed. by Lynne Cooke and Stephen Hoban (NY: Dia Art Foundation, 2014) pp.175-188, p.180.
[290] Hans Ulrich Obrist, *Interviews*, ed. by Thomas Boutoux, vol.1, (Milan: Edizioni Charta, 2003), p.474.
[291] Seed dispersal by ants.
[292] Robert Storr, 'Pierre Huyghe: Singular Writings', in *Artpress 404,* (2013), pp.41-44, p.44.
[293] Boetzkes, p.78, "acephalic" meaning having no head or one that is reduced and rendered indistinct.

Figure 21: Pierre Huyghe, *Untilled,* (2011-2). Alive entities and inanimate things, made and not made. Exhibition view: *Untilled,* dOCUMENTA 13, Kassel, 2012. Commissioned and produced by dOCUMENTA (13) with the support of Colección CIAC AC, Mexico; Foundation Louis Vuitton pour la création, Paris; Ishikawa Collection, Okayama, Japan. Courtesy the artist; Marian Goodman Gallery, New York; Esther Schipper, Berlin. © VG Bild-Kunst, Bonn, 2019. Photo © Pierre Huyghe.

scar on his head occasionally appeared to perform the same repetitive actions.[294] Meanwhile, the aesthetically sexualised figure of the nude complements the propagating activities of the bees at work. Positioned within Huyghe's unrational space, this hybrid form no longer exists within a dialectical frame opposing one side – women or culture, insects or nature – against the other. Rather, nature, culture, women and insects co-exist together in a depersonalised space vacated of any human subject. Within the hive, a multitude of living things are amassed and assimilated into one group. For Christopher Hollingsworth, the "pictorial space" of the hive "is bipolar" and "its emotional associations follow suit." The portrayal of community attracts the gaze of the human viewer, visualising an ideal of harmony and productivity humans can only envy. But at the same time, the political implications of such a structure being without hierarchy repels the human gaze.[295] Two extremities are established and conflicted further by this hive's placement on a static, aestheticized human body.

[294] Pierre Huyghe, 'Hans Ulrich Obrist in Conversation with Pierre Huyghe', *Serpentine Galleries,* (17/10/18), available on *YouTube,* https://www.youtube.com/watch?v=emYOOVRzG8E, [accessed 5 July 2019]. Huyghe describes how the man's scar gave the impression he could have undergone a brain transplant.
[295] Christopher Hollingsworth quoted in Rother, p.90.

The head/hive grew over time as the bees produced more and more honey and increased their numbers. The entire form morphed into a figuration of polar opposites coalescing. The head/hive merged as one expanding feminine space in process, with no fixed borders. Boundaries between self and other, community and individual, nature and culture, and life and art were lost into the background as all identities assimilated into one hostile form. This hostility extends beyond the immediate threat of the bees' sting. This hybrid form in fact suggests a much more complex threat to the social structures of patriarchy and anthropocentrism.

Huyghe's sculpture for me is not a threat to rational humanity in opposition to the irrational world of insects. The cultural associations of the nude in fact allows its positioning as an alienating visualisation of women and insects combined, propagating and expanding into one uncontrollable dangerous object with an alluring agency of its own. Human viewers cannot help but be intrigued, edging closer to get a better view of these women at work. However, the fear of their sting means proximity and understanding is limited, determined by the bees themselves. And within this hybrid, masculinity holds no place. This is not a case of holding the feminine up against the masculine in an uncanny subversion of power relations. Instead, in Huyghe's unrational art world, oppositions are usurped and instead an unspeakable visualisation of femininity reigns. Huyghe's sculpture reminds us that animal worlds can never be penetrated, and at the same time creates a space for even more radical forms of coexistence to materialise. When positioned outside of patriarchal narratives, these bodies defy anthropocentric and patriarchal discourses and propose ways of being which evade any dialectical view of the world. Viewers are asked to consider animal-feminine space independent of anthropocentrism and patriarchy. It is when this space no longer conforms to the words that we use to cement gender binaries and species hierarchies that it becomes the most dangerous of objects. The possibility for evasion, disruption and transformation of social norms is this dangerous object's most threatening capacity.

<u>The Praying Mantis</u>

I now shift from my analysis of social insects – collections of matriarchies that subvert ideas about male individuality and control – to investigate a particularly hungry, solitary insect whose peculiar practices of eroticism are recorded in detail by Roger Caillois. Caillois was a French polymath and self-named "insect collector" associated with the Surrealist movement in the early 1930s.[296] His writings challenge the meanings humans apply to the natural world which he believes result in objective over-determinations. He berates the anthropomorphic investigations of many

[296] Elizabeth Grosz, 'Animal Sex' in *Sexy Bodies: The Strange Carnalities of Feminism,* ed. by Elizabeth Grosz and Elspeth Probyn, (London: Routledge, 1995), pp.278-299, p.281.

entomologists, like those we have heard from the writings of Michelet and Maeterlinck. He instead seeks a "decentralisation of perception and a new understanding of how other sensations could be figured through animal worlds."[297] The Surrealists, he felt, achieved this, coupling new modes of perception with, as Jussi Parrika notes, "a fascination for morphing insects – a biomorphing of sensory capabilities."[298] Surrealist images melt together animal, supernatural, mechanical and human forms to challenge anthropocentric principles about humans as the origin and centre of all meaning, combining tautological concepts to create uncanny codes for the familiar and strange.

Caillois investigates "objective ideograms" of the natural world which he believed "concretely realise the lyrical and passional virtualities of the mind in the outside world."[299] One of the most well-known of his investigations was that of the praying mantis. This tiny insect has been observed since at least the sixteenth century for the alarming incidence of female decapitation of the male after, or even *during*, coitus. Long believed that such acts of cannibalism could be explained in terms of utility, such as the need of protein for the growth of newly fertilised eggs, Caillois upturned such beliefs in his essay 'The Praying Mantis: From Biology to Psychoanalysis'. He reveals that female cannibalism amongst praying mantises in fact serves specific sexual functions. The female ruthlessly kills her partner in pursuit of her own desire, generating a "better and longer performance of male spasmodic coital movements."[300] He reads the male insect as "an artificial, mechanical, inanimate and unconscious machine," "its joint rigidity recall[ing] a coat of armour or an automaton" whose sole purpose is the satisfaction of feminine desire.[301] In Caillois' reading, it is not only the female who is cast as a mindless sexual machine but now also the male.

Caillois was initially attracted to praying mantises out of frustrated curiosity; where he had lived as an adolescent they were not to be found, and he became determined "to possess, to see, to know." He was fascinated by their close and curious associations with femininity, often holding a privileged status in myths of many cultures. This awarded the insect a "richly evocative power" able to be used as a source of projections, writes Elizabeth Grosz. The praying mantis becomes an object of fantasy and speculation, a "site of over-determination" alongside its uncanny resemblance to the human form.[302] Mimicking the stance of a man in prayer *or* the act of love, these two radically different positions might be merged into one, hinting at the necessary cry for redemption before the

[297] Parrika, p.91.
[298] *Ibid.*, p.83.
[299] Roger Caillois, 'The Praying Mantis: From Biology to Psychoanalysis' in *Caillois Reader,* pp.69-81, p.80, reworked over 1934-7.
[300] *Ibid*., p.78.
[301] *Ibid.*, pp.78 and 79.
[302] Grosz, p.282.

male meets his lover's lips. The praying mantis as a figure confounds human meanings, provoking surprising possibilities as we attempt to control them with our words.[303]

Caillois's text sought to systematise the sexual emblem of the *femme fatale,* or of the interplay between sex and death. He references scientific fact and objectivity preceding his own study but detaches himself from these observations to instead unearth his own form of "absolute objectivity."[304] Caillois's essay emphasises the praying mantis's natural ability for deception through mimicry, (as well as its digestive dimension), impacting "bush people's confidence in the accuracy and primacy of human vision." Nicky Coutts argues that "the story explicates human vulnerabilities when faced with mutable forms."[305] With its shape-shifting talents, the praying mantis evades human categorisation and in so doing threatens the validity of human vision and our position as *the* naming species. During their lengthy, many-armed embrace, the two insect bodies become one as the female begins to methodically devour her lover.[306] Human ways of understanding are turned upside down by this species who totally defies any beliefs about the need for conscious control over the body. Not only does the female insatiably devour her partner (continuing cannibalistic coitus with other unwitting males to her heart's content), but the male mantis can uncannily perform a variety of actions in his own decapitated state. "Without any centre of representation or of voluntary activity [… he] can walk; regain [his] balance; sever a threatened limb; assume the spectral stance; engage in mating; lay eggs; build an ootheca" and, most frightening of all, "lapse into feigned *rigor mortis* in the face of danger or when the peripheral nervous system is stimulated."[307]

This insect challenges Lacanian beliefs that animals cannot "'pretend to pretend' as human beings learn to do in manipulating a rational second order of language." In *The Animal That Therefore I Am,* Jacques Derrida argues with Lacan's description of the "self-captivation" of animals only in the imaginary – never to gain entry into the world of the symbolic – thus assuming "a firm division between need and desire, the world and language."[308] Animals, for Lacan, are without symbols for the signs they read are unable to access the full meaning of the world, unable to deceive and unable to desire. However, the praying mantis's murder of her lover for her own sexual satisfaction expresses a desire, albeit one humans can barely stomach. And the uncanny abilities of the male mantis when dead display a capacity for deception that we humans can't even imagine.

[303] Caillois, 'Mantis', p.80 n.30.
[304] Claudine Frank, 'Introduction to "The Praying Mantis"' in *Caillois Reader,* pp.66-69, p.67.
[305] Nicky Coutts, 'Portraits of the Nonhuman: Visualisations of the Malevolent Insect' in Brown, pp.298-318, p.314.
[306] Sleigh, pp.288-9.
[307] Caillois, 'Mantis', p.79. "Ootheca" being an egg case. Here Caillois contradicts Lacan's argument that animals cannot deceive. According to Jacques Derrida, Lacan assigns all animals a certain "lack", "deficit", or "deprivation", being unable to erase their own traces. Derrida, *The Animal,* pp.119-140. Yet this insect can play dead when it is already dead, clearly overtaking any human capabilities for deception.
[308] Turner, 'Introduction' in *The Animal Question,* ed. by Turner, pp.1-8, p.4.

Mantises astound human eyes with their uncanny abilities to feign outrageous and complex living states, either when decapitated so *apparently* already dead, or in pursuit of the most blood-curdling desires. These insects contradict Lacan's beliefs about animal relegation to the imaginary and in fact enter a symbolic realm all of their own. Human terms fail miserably when applied to the atrocities of the insect world. The signs that this species makes use of are of a completely different significance to the signs that we humans use.

The praying mantis subverts the primacy of human vision, our beliefs in life, sex, desire and death, and suggests uncanny and supernatural abilities in insects typically labelled senseless automatons. Headless and so without a brain or the organisational structure of consciousness, this insect remains autonomous, evading danger and continuing its sexual duties.[309] If it was merely an automaton it would be trapped in the endless repetition of coitus. However, its ability to respond to changing circumstances suggests some degree of consciousness or centralised control. The mantis's behaviour remains beyond the words and concepts of humans, our perceptions and language reaching their limits. Caillois's essay suggests a porosity of boundaries between forms of life as he presents these insects as part-human, part-animal and part-machine. His narrative subverts anthropocentric notions of mind over matter, male over female and the living over the technological, and figures alternative ways of being which at once threaten and entice humanity.

For Caillois, the praying mantis is a threatening figure, a sexual automaton loaded with negative human associations – religion, food, orality, vampires, the *vagina dentata* and automatism. This insect becomes a "feminine android … a machine-woman incommensurable with man."[310] Based on this eruption of association, Braidotti writes how for Caillois, this "insect-paradigm is a model for polymorphous anti-phallic sexual activity."[311] However, Grosz attempts to reclaim this dangerously feminised insect into a different sort of threat. She explains how, like the black widow spider who we meet in chapter three, the praying mantis comes to represent the psychological imaginations and projections of men, "the intimate and persistent link between sex and death, pleasure and punishment, desire and revenge."[312] This insect and its sexual/mimetic behaviours provides a "differential and oppositional structure of erotic identities and positions in specifying feminine sexuality and subjectivity against masculine sexuality and desire."[313] The female's "endless hunger deters gratification to perpetuate itself as craving." Unlike typically human beliefs in the development of and investment in sexual relations, this is a sexual union whose goal is solely

[309] Grosz, p.284.
[310] Grosz, p.284.
[311] Braidotti, *Metamorphoses*, p.158.
[312] Grosz, p.278.
[313] *Ibid.*, p.279.

(female) climax – a *petite mort* for the male, sex literally becoming something to die for.[314] Sexual intercourse here almost seems to have no function but becomes mere excess or luxury, and Caillois recognises this bind between pleasure and expiration. "Woman is thereby cast into the category of the nonhuman, the non-living or a living threat of death."[315] Grosz advances her hypothesis: "the mantis is a perfect machine: not a machine for survival, but a sexual machine, a fucking machine […] whose reaction under the threat of death is imminently coital." For Grosz, this insect is a "highly sexualised 'queer' entity, capable of titillating the collective imagination especially on the issue of sex and death."[316] Rather than reading the compression of women-insects-technology as a negative concept to be dominated and controlled, Grosz in fact assigns a sexual agency and power to this atypical alliance and emphasises its abilities to interrupt erected patriarchal narratives.

Caillois's intrigue for the voracity of the female praying mantis arouses his own fears about masturbation, castration, childbirth, circumcision and death, all embodied in this image of the *vagina dentata.*[317] This male fear/fantasy positions women as nonhumans, androids, vampires or animals with an insatiable appetite for consump/mation, as well as a link between male organ detumescence, the depletion of physical energies and a "fantasmatic projection onto woman of phallic power during the act of intercourse."[318] For Grosz the "engulfing mother, preying on male weakness" is a consequence "in which male orgasm has functioned as measure and representative of all sexualities and all modes of erotic encounter."[319] Grosz seems to suggest that perhaps if man was not the measure of all things, alternative power structures and ways of being, fucking, loving or reproducing might not seem so threatening. The praying mantis uncannily mimics the human form in *prayer* but as she *preys* upon her male lovers, she *arouses* male fears about weakness, castration, death or even utter irrelevance in the hands of female sexuality. This insect becomes a feminised dangerous object transgressing the boundaries of what it means to be a male subject, invoking fears

[314] See for example Jacques Lacan's, *The Seminar of Jacques Lacan, Book X, Anxiety*, trans. by Cormac Gallagher, pp.4, 18-19, 221 and 302 where the psychoanalyst describes how an encounter with a praying mantis "the enigmatic mirror of the ocular globe" prevents him from seeing his own image thus provoking an anxiety within him related to the desire of the Other. In his "voracious desire" for an animal Other "to which no common factor links me", the psychoanalyst experience a "*méconnaisance"* (misrecognition) or an alienation of his desire." Available: https://www.valas.fr/IMG/pdf/THE-SEMINAR-OF-JACQUES-LACAN-X_l_angoisse.pdf, [accessed 23 October 2019].

[315] Grosz, p.284.

[316] Braidotti, *Metamorphoses,* p.158 Rother similarly reads the sexual traces of insects in the work of others including Derrida, coining her own neologism "insex" to emphasise the very strangeness of insects, particularly concerning their gender ambiguity and how these tiny creatures might offer up new ways of understanding human (sexuality) and ways of being.

[317] Male fears for castration manifest in the image of the *vagina dentata,* identifying their whole body with their male member and the female mouth with the vagina, sexual relations become the ultimate threat to male selfhood. By this I mean both physically and ideologically – the male as a physical and mental being cannot stand his ground – maintain his concept of his own self – against this female sexual embodiment.

[318] Grosz, p.284.

[319] *Ibid*., p.293.

of incomplete selfhood (the castrated male) and transgressing the relationships humans construct to distinguish male and female power, love, sex and death. Like Maeterlinck's matriarchies, these feminised insects draw attention to alternative structures of power which remove men from the equation and formulate new modes of relating not confined to man and woman. For the praying mantis, sex is something worth dying for, and in the act of coitus, selfhood expires as the male and female bodies automatically pulse and gyrate without individual control or agency. In this overtly sexual space, it is no longer a question of opposing male and female, living and automatic, or sex and death. Rather, this is a depersonalised space where femininity dominates without recourse to masculinity, and it is in this way that she becomes the most dangerous. The site of the praying mantis is a site of unrationality, human projections and impositions on the world cannot be upheld. In such a site, a new type of alliance between women and insects emerges which cannot be constrained by masculinity and now, it well and truly bites back. Women and insects acquire an agency and position of power on their own terms, no longer dependent on any binary that positions them against Man and his associations. Rather, a totally new frame of reference is introduced that engulfs, distorts and reclaims masculine mechanisms for its own pleasure.

The New Science of Surrealism

Interdisciplinary in nature, Roger Caillois's work combines anthropological, religious, biological, psychological and aesthetic study in search for "fundamental structures of the individual and collective imagination" and a systematisation of the imaginary. He pioneered his own methodology which articulated a "non-scientific, poetic 'science.'"[320] His plenary of sources guaranteed accuracy to which he was able to apply his own philosophies on space and subjectivity, most specifically in 'Mimicry and Legendary Psychasthenia' (1935).[321] Like Jean Painlevé's films discussed in my first chapter, Caillois's writings convey an interest in new technologies, science and the animal world and as Jussi Parrika explains, this amounted to a rethinking of the nature of time and spatiality for both.[322] With a focus on the zone between animality and artifice, Caillois explored animality "not as a metaphor but as a vector that can be used to more thoroughly understand the affect life of modern subjectivity."[323] He investigates the life of organisms to demonstrate "the existence of a certain lyrical objectivity" beyond language.[324] Caillois's writing on mimicry shows how

[320] Frank, 'Introduction' in *Caillois Reader*, pp.1-53, p.6.
[321] *Ibid*., pp.10-11. The term "psychasthenia" emerged in the 1930s in French psychiatric parlance to refer to "an exhaustion of personal energy, a becoming (inanimate) of the energetic ego." Parrika, p.99.
[322] *Ibid.*, p.97.
[323] *Ibid*, p.83.
[324] Caillois, 'Mantis', p.81

one's self is always in relation to and open to affect from one's temporal and spatial surroundings, radically challenging a constituted and constituting subject – perhaps *constituent* is more apt? – and opening up a space for otherness and non-identity.[325]

In 'Mimicry' Caillois explores incidences of mimesis among insects in the natural world. He challenges preceding scientific explanations for this behaviour as a functional tool of surprise, disguise and self-defence against prey.[326] Readings of insect mimicry, which see a "snake's head" or "two big blue 'eyes'" on butterfly wings for example – images *supposedly* to terrify prey – are criticised as anthropomorphic.[327] For Caillois this "resemblance exists solely in the eye of the beholder." Instead "the objective phenomenon is the fascination itself."[328] He hypothesises that rather than being an intentional shape-shifting ability of insects to hide from, or divert their prey (also occurring amongst inedible species), mimicry's goal is "to *become assimilated in the environment.*"[329] He recalls the "wretched" *Phylliidae* who "graze on each other, literally mistaking other *Phyllidae* for real leaves" which he views "as some sort of collective masochism culminating in mutual homophagy – with the imitation of the leaf serving as an *incitement* to cannibalism in this particular kind of totemic feast."[330] His study shows how "particular species are always in excess of their survival value" thus hinting at a possible "superfluity of life itself" writes Grosz.[331] Through mimicry's dangerous expenditure of energy and even the risk of death, this natural phenomenon is no longer a utilitarian strategy but a "dangerous luxury" and a "veritable *lure of* space" risking the total dissolution of the self into one's surroundings.[332]

> It is obvious that the utilitarian rôle [*sic.*] of an object never completely justifies its form, or to put it another way, that the object always exceeds its instrumentality. Thus it is possible to discover in each object an irrational residue…[333]

Caillois identifies the possibility of a superfluous and collective *irrationality* amongst mimetic insects that cannot quite be explained in human terms. This is "not […] a representation of figures or

[325] Christian Hite, 'Mimetic Respons(a)bility: Lacan, Caillois, and the "Mirror Stage"' (Spring 2001) p.7, available on *Academia.edu*: https://www.academia.edu/9539736/Mimetic_Respons_a_bility_Lacan_Caillois_and_the_Mirror_Stage_, [accessed 14 May 2019].
[326] Caillois, 'Mimicry', p.91.
[327] *Ibid*., p.92.
[328] *Ibid*., p.93.
[329] *Ibid.,* p.98.
[330] *Ibid*., p.97.
[331] Grosz, p.280.
[332]Caillois, 'Mimicry', pp.97 and 99.
[333] Caillois quoted in Grosz, p.280,

space but […] a spatial assemblage that bordered on disorder."[334] The polymath tried to demonstrate a new "aesthetic-ontology" in which spatiality and temporality become depersonalised.[335] During camouflage, the creature is captivated "by its representation of and as space" and thus displaced "from the centre to the perspective of another."[336] Hal Foster compares such an event to "the pervasive ideal of the beautiful redefined in terms of the sublime, advanced in surrealism: a convulsive possession of the subject given over to a deadly *jouissance*." As language and temporality breakdown, a "compensatory investment in the image" is provoked.[337] The subject vacates his own body to become assimilated into his surroundings, leading to the materialisation of a depersonalised space within which meaning is lost, boundaries – between self and other, inside and outside, background and foreground – dissolve and unrationality prevails.

For Caillois, mimicry thus enters into "the realm of psychasthenic psychology, or, more specifically, of *legendary psychasthenia*."[338] Schizophrenics, when asked if they know where they are "invariably reply, *I know where I am but I don't feel that I am where I am.*" Space is no longer constituted as an ordered outside to the subject but instead "chases, entraps and digests them in a huge process of phagocytosis. Then, it ultimately takes their place." Just like the voracious appetite of the praying mantis as the *vagina dentata* or the reproductive machine of the hive, space consumes the male subject, dissolving his bodily form to a decapitated shell. This results in a dissociation of the body and mind: "the subject crosses the boundary of his own skin and stands outside of his senses [...] He feels that he is turning into space himself."[339] And just like the schizophrenic who experiences a self-permeability to the darkness around him, the insect mimicking plant life "hides or gives up those physiological functions linking it to its environment. *Life withdraws to a lesser state.*"[340] Within social insect communities, individuality is lost in favour for the whole and male identity expires to become almost totally irrelevant or eliminated. In instances of sexual cannibalism, this fear is made absolute as the female devours her partner for her own pleasure. The male self is *sacrificed* for the purpose of the other – consumed by their feminine being. Space is no longer positioned as an ordered outside to the subject and is instead left vacated. And now, typically repressed female or animal identities are able to erupt into the frame, occupying positions and reclaiming control, whilst no longer being held in the shadow of their masculine/human others.

I now return to Pierre Huyghe's sculpture *Untilled (Liegender Frauenakt)* which visually brings to life this moment of consump/mation. Space here acquires its own agency, engulfing the

[334] Parrika, p.98.
[335] Caillois, 'Mimicry', p.100.
[336] Grosz, p.281.
[337] Foster, p.165.
[338] Caillois, 'Mimicry', p.100.
[339] *Ibid.*
[340] Caillois, 'Mimicry', p.101.

human body and performing its own crucial tasks of propagation. I argue that through this empowering alliance of women, art and nature, Huyghe in fact enables a total repositioning of human expectations.

Engulfing Space

The engulfment of the female form by the mass of the beehive in Huyghe's hybrid body recalls Caillois's descriptions of space, no longer a constituted outside but something that "chases, entraps and digests […] in a huge process of phagocytosis. Then, it ultimately takes their place." Like the praying mantis who decapitates her lover during sex, the space of the bees' swarm consumes this human figure, methodically engulfing her body (figure 22). The human form – the female body 'proper' – is threatened by the bees, and its "life withdraws to a lesser state."[341] Huyghe's creation suggests not only at the fragility of the boundaries separating humans and animals, nature and culture, art and life, but also at how these dualisms can be usurped to allow new configurations to erupt. He visualises a female/insect hybrid with its own threatening agency, the nude propping up the hive's form whilst the bees themselves engulf the female's body. In this symbiotic relationship, neither insects nor women are positioned against any human subject but instead acquire a comradery – co-constructing the figure together – which allows them both an agency and existence on their own terms.

In contrast to the static figure of the sculpture, viewers see the ongoing task of pollination performed by the bees (figure 23).[342] Ideals about art being without purpose are challenged. At the same time, the female insects are compared to the repetitive and mindless performance of man as automaton. Huyghe resurrects post-industrialisation fears about the mechanisation of society, a society morphing into reproductive insects, whilst at the same time firmly aligning women, insects and creativity in the figure of the hybrid sculpture. He challenges our understandings of oppositional relationships, placing art, technology, humanity and the components of a natural ecosystem side by side in a wealth of different configurations. Boetzkes writes that "Huyghe reverses [Joseph] Beuys' intervention of bringing the animal into art institutions, instead he drops art into an ecosystem so that it is merely one object among others engaged in a variety of indifferent exchanges."[343] Huyghe deconstructs normal relations by placing things from out there (nature) in here (culture) – an elite locus not normally open to just anyone or anything – and vice versa. We are not sure if this is a

[341] *Ibid.*
[342] Pierre Huyghe, 'Untilled' in *Documenta (13): The Guidebook*, (Hatje Cantz, 2012), Exhibition Catalogue, p.262.
[343] Boetzkes p.75. See Joseph Beuys' action *I Like America and America Likes Me* (1974), a video recording of the three days the artist spent locked in a gallery in New York with a live coyote.

Figures 22 and 23: Pierre Huyghe, *Untilled,* (2011-2). Alive entities and inanimate things, made and not made. Exhibition view: *Untilled,* dOCUMENTA 13, Kassel, 2012. Commissioned and produced by dOCUMENTA (13) with the support of Colección CIAC AC, Mexico; Foundation Louis Vuitton pour la création, Paris; Ishikawa Collection, Okayama, Japan. Courtesy the artist; Marian Goodman Gallery, New York; Esther Schipper, Berlin. © VG Bild-Kunst, Bonn, 2019. Photo © Pierre Huyghe.

natural nor a cultural space, as objects and functions mix and mingle. In this way, *Untilled* (the installation) becomes a depersonalised space, vacated of human subjectivity and its projections, that allows the emergence of atypical alliances and irrational meanings. Human viewers are not invited to contemplate aesthetic beauty and its meaning to themselves (a reinforcement of anthropocentrism) but are instead decentred, placed in dialogue with the (in)difference of a variety of nonhuman life in its own complexity and inconceivable significations.

Caillois too proves that the human subject can no longer be located as the origin or centre of the coordinate system within their experience of space. He is simply one point among many. Caillois's vision of a "body-milieu continuum" challenges anthropocentric notions of individuated, meaning-making subjects.[344] Grosz explains how "the primacy of the subject's own perspective is replaced by the gaze of another for whom the subject is merely a point in space, not the focal point organising space."[345] The subject is dislodged from its central position and captured by the gaze of the other. The human subject becomes an object, a point marking the coordinates of space for another, subject to the gaze of this other. This is a positioning mirrored in the art object, as Huyghe presents in *Untilled (Liegender Frauenakt).* With his hybrid female/beehive form, Huyghe decentres the human subject from her central position and places her as a point in space to be engulfed by the body of another. All this happening under the gaze of another viewing subject standing elsewhere in the space of Untilled. We are reminded as we observe from within this installation that no one thing can be the focal point organising space, but that we all occupy a shared space of relation, making us dangerously permeable to subversion from others.

An Obsession with Space

Roger Caillois's writings emphasise that self-identification is always dependent on others – our surroundings, other humans and nonhumans. It is here that we see his impact upon Lacanian psychoanalysis – the psychological concepts of mimicry and the problem of the signification of space for a living organism being integral to Jacques Lacan's concept of 'The Mirror Stage'. In this first seminar Lacan challenges Descartes's assertion that disembodied cognition lies at the heart of human development – for Lacan it is in fact mimesis and representation, and his description of the mirroring process "demonstrates the degree to which consciousness can be deluded in its

[344] Parrika p.101. Parrika sees Caillois' ideas as a continuation of Uexküll's theories about function-circles that make an animal part of its milieu. Caillois offered a way to understand the porous nature of the barrier between inside and outside which for Parrika is a "barrier to be understood as a topological field and a surface not a discontinuous border", p.104.
[345] Grosz, quoted in Parrika, p.104, (my italics).

apprehension of reality."[346] In fact, through an orginary mimetic subject formation, subjectivity is posited as fantasmatic, an *imaginary* relation structured by a specific perceptual apparatus.[347] The human hold on the world is once more threatened as we read Lacan's seminar which grounds the subject in a series of misrecognitions and false projections, opening up possibilities for new configurations.

Lacan explains that when a young child first identifies himself in a mirror, he begins to make sense of himself and the world around him and thus begins entry into the "symbolic order". However, at the same time, the infant recognises a discordance between his own being and the image (*imago*) he sees in the mirror – the "ideal-*I*".[348] This moment of ego-constitution is in fact a simultaneous experience of irreconcilable self-division. The image the infant sees in the mirror remains a fantasy or illusion of a fully constituted and constituting subject. Because of the level of human prematurity when the mirror stage takes place, the awkwardness of gestures observed between the "ideal-*I*" and the subject's own experience results in a kind of "paranoiac knowledge" that the possibility of a perfect, future self remains in reach. Lacan's theory symbolises the *I*'s mental permanence while at the same time prefiguring its alienating (pre-)destination.[349] His autonomous subject is an illusion and is constituted "in an abstract equivalence [in space] due to competition from other people."[350] "The motor of subjectivity is misrecognition" because Lacan's "human subject is incapable of perceiving an unmediated world" resulting in an "alienating predestination" from their own reality.[351]

Lacan, like Caillois, asserts that humans are deluded, projecting their needs and desires onto nature and then misrecognising the former as the latter. Vicki Kirby analyses 'The Mirror Stage' to suggest that if the human "I" remains only an ideal, forever mediated through others and grounded in misrecognition, Lacan "mandates a world that is uncannily human – a [narcissistic] *self*-reflection of sorts." In rendering the nonhuman world inaccessible to humans (and vice versa) there can therefore be no integration of the *Innenwelt* and *Umwelt.*[352] Humanity's "animal origins are both lost and yet phantasmatically reinvented."[353] Kirby's reading of Lacan posits "an *I* whose situation is precarious" due to the dynamic production of identity, "subject to myriad external forces that

[346] Carla Freccero, 'Queer Theory' in Turner *et.al.* pp.430-443, pp.434-5.
[347] *Ibid.*, p.436.
[348] Lacan, 'The Mirror Stage', pp.75-76. With this word "imago" the development of humans is seen to reflect in some way the evolutionary metamorphosis of insects. This ambiguous term meaning at once a complete or perfect adult insect and an idealised, psychoanalytic reflection.
[349] *Ibid*, p.76.
[350] *Ibid*, p.80.
[351] *Ibid*., pp.76-7.
[352] A subject's inner world and their outer-world or environment.
[353] Kirby, p.56.

entirely exceed the subject's ability to control them."[354] Kirby critiques Lacan's work to propose humanity's repressed yet inescapable past, present and future with animal life, and challenge anthropocentric notions of an individuated and defined self, distinguished from, and applying meaning to, its environment. In fact, the human subject is forever mediated by the animal world, which becomes an alluring space that the human subject cannot help but be engulfed by. Culture cannot be untangled from nature, and Caillois's praying mantis is the ideal imago to represent to humanity their (subconscious knowledge for their) susceptibility to the appetite of the other.

Lacan directly references Caillois in 'The Mirror Stage' because for him, he "illuminated the subject when, with the term 'legendary psychasthenia', he subsumed morphological mimicry within the derealising effect of an obsession with space."[355] Caillois's reconceptualisation of mimicry suggests an inability to distinguish between the organism and its surroundings, positing a devouring space of excess and luxury which threatens the subject with total dissolution into their surroundings. Lacan too identifies a space external to the human subject which must be appropriated in order to retain the integrity of the ego and allow entry into the realm of the symbolic. As in Caillois's discussions of mimicry, this is a space that allures the human subject, engulfing their form and from then on alienating them from the world through the imposition of language and other human constructions onto their surroundings. Carla Freccero explains that "[w]hat Lacan and Caillois show is the fantastical, surreal nature of reality, of the relationships between self, other and space" and so undermine anthropocentric beliefs that human consciousness, mind or the cognitive "serve as a guarantor of human exceptionalism, but like other living awareness in the world, is an imaginary relation structured by specific perceptual apparatus."[356] Language, *the* human marker of distinction, is proven to be our most self-deceptive tool, falsely fuelling our beliefs that we are exceptional and superior against all other species.

Hybridising Bodies

> Here, the home of the people is the people's substance and visible soul; from themselves they have extracted their city and their city is, in truth, themselves. Bee and hive, it is one and the same thing.[357]

[354] *Ibid.* (my italics).
[355] Lacan, p.77.
[356] Freccero, p.437.
[357] Michelet, para.313.

Pierre Huyghe's *Untilled (Liegender Frauenakt)* visualises the engulfing space of a beehive, that slowly and systematically swallows the head and then body of a female sculpture. In this process, viewers witness the coalescence of art and culture with nature; the human, the animal and the insect; the rational and the irrational; and the possible and the impossible. Huyghe creates a space where binaries disintegrate, and hierarchies topple. Traditional patriarchal and anthropocentric structures have no place here. This is a space vacated of the (human/male/rational) subject and where language and other cultural constructions make no sense. Huyghe's viewers are exposed to an empowering (and threatening) figuration of unusual alliances. As in Lacan's descriptions of the alluring space of the infant's reflection in 'The Mirror Stage' and Caillois's visualisations of the sexually devouring praying mantis, Huyghe's sculpture is a space of (erotic) consump/mation. As we observe this quivering form, we too become unsure of our place in this space, as the primacy of our central perspective and position in the world is shattered. Viewers become *a* – not *the* – point in space that is threatened with an engulfment by space itself as the hive continues to propagate and the bees increase in number. In Huyghe's *Untilled,* space becomes palpable and identities permeable. Agency is redistributed and reconfigured in surprising ways which challenge human understandings of their world. It is this dissolution of norms that makes Huyghe's work the most subversive.

In this chapter, I challenge human beliefs in the all-knowing representational capacities of our technology language, to emphasise the limits reached when humans look to nonhuman worlds. I have developed this interrogation to suggest how unholy alliances of women with insects, typically relegated together beneath their masculine other, can in fact find their own agency when inhabiting an unrational realm outside of patriarchy and anthropocentrism. Once human constructs and ideologies are removed, insects and women become even more threatening, able to exist on their own terms and no longer placed in opposition to masculinity. In the matriarchal world of the beehive or the sexual space of the female praying mantis, masculinity can no longer be opposed to femininity but is rather a surplus, an irrelevant excess to be sacrificed for feminine propagation or more alarmingly, pleasure. These female insects therefore defy not only their positioning as inferior to men, but completely eradicate any oppositional relationship between the sexes. Insect worlds bring to the foreground configurations of power we do not even have the words for, shattering illusions that identities can be determined and controlled by language. When we look beyond our patriarchal, cultural and linguistic structures, an alternative agential and political comradery can be established between women and insects, visualised here as a voracious and dangerous alliance with an erotic agency of its own.

Prelude: Unravelling the Secretions of the Silkworm

Silk Matters

Silkworms are the larvae of the silk moth *Bombyx mori*.[358] The Chinese began ap/expropriating them from the wild about 8,500 years ago for the human practice of sericulture.[359] The natural life cycle of *Bombyx mori* demonstrates the most advanced form of metamorphosis, progressing through four distinct stages of development in the completion of one generation of the species, these being ova, larva, pupa and imago. However, for nearly all silkworms bred in human captivity, this cycle is curtailed for the extraction of the luxury commodity silk. Over years of human contact and proximity due to industrial purposes, these insects have undergone genetic mutations including a change in colour to their flesh and the loss of their ability to fly when moths.[360] Now the *Bombyx mori*'s life cycle is completely entangled with that of our own, its body only becoming itself (be that through the spinning of its silk, hatching from an egg or emerging from a cocoon) through sustained mutual contact with human others.

I consider how the physical body of the silkworm and its processes might unsettle and entice us to reconsider our relationships to others. How could this tiny grub inspire alternatives not based upon the anthropocentric appropriation and exploitation of difference for the distinction and profit of the human species? As we head towards what has been named the sixth mass extinction event, it seems imperative humans change their relationships – currently based on binary dualisms and processes of othering – if any of us are to survive.[361] By unravelling the strangeness of silk/worms, mingling more intimately with their physicality, might the self-transformative capacity for metamorphosis contained within this insect and its secretions, spawn threads for stitching together new material for an ontology that accommodates the multiplicity of differences present, and in emergence, within both the species of our own and those of others?

[358] This prelude was published: Elizabeth Atkinson, 'Unravelling the secretions of the silkworm' in *JAWS: Journal of Arts Writing by Students,* 5:1, (2019), pp.93-105.
[359] 'Silk', *Wikipedia.org,* available: https://en.wikipedia.org/wiki/Silk, (n.d) [accessed 29 September 2019].
[360] Kumi Oda, *Circle of Silk,* (2016), short film, 9 mins. 20 secs., available: https://www.youtube.com/watch?v=QWfm0u7injk, [accessed 27 April 2018].
[361] See for example, Terry Glavin, *The Sixth Extinction,* (NY: Thomas Dunne Books, 2006) and Timothy Morton, *Being Ecological.*

The Lifecycle of Silk

Figure 24: Still from Kumi Oda, *Circle of Silk* (2016), 9 mins. 20 secs. video. Courtesy: the artist

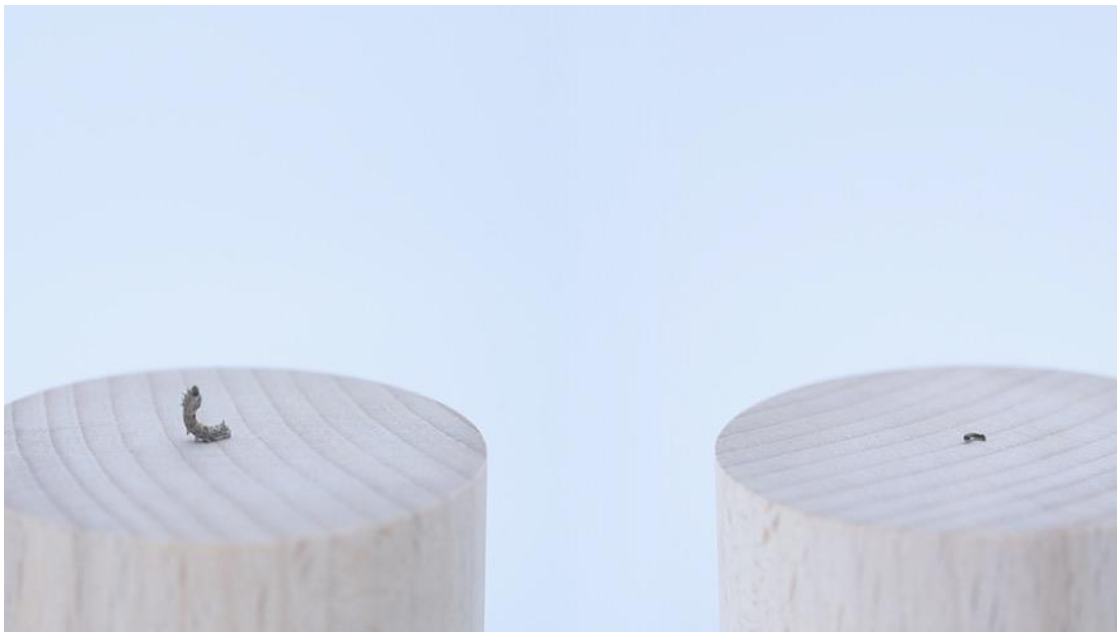
Figure 25: Still from Kumi Oda, *Circle of Silk* (2016), 9 mins. 20 secs. video. Courtesy: the artist

The parent silk moth lays her eggs on specially prepared paper, which measure around the size of a pinhead, hatching a few days later under warm conditions (figure 24). Out of the egg emerges a gelatinous, vulnerable larva that enters the vegetative stage where growth takes place (figure 25). The insatiable appetite of the silkworm is pacified with vast quantities of mulberry leaves for up to 35 days, during which time they grow to be about 10,000 times heavier than when they first hatched. Now ready to pupate, they weave a cocoon from their own milky secretions, spinning a thread measuring around one mile long over two to three days before disappearing within a fluffy

cloud that serves as self-enclosure and protection to mask their secret self-transformation (figure 26).[362]

Figure 16: Still from Kumi Oda, *Circle of Silk* (2016), 9 mins. 20 secs. video. Courtesy: the artist

Metamorphic changes within the pupa materialise the fluttering moth. However, most silkworms will in fact be boiled, baked or pierced with a needle at this point, so as to kill the pupa and enable the extraction of silk protein fibres to be fed into the spinning reel. Only a select number of cocoons are allowed to metamorphose into moths to breed the next generation of larvae. The silkworm is an insect now alive only for human use, and yet as Kumi Oda points out in his short film; when we buy a silk blouse, we have no idea about the 630 worms that were bred in insect factories and killed for their yarn.[363] Oda's voiceover to *Circle of Silk* – which shows the complete life cycle of a silkworm – draws our attention to the paradoxical nature of our relationship to silk/worms. Oda tells his viewers how silkworms are now being genetically engineered to produce more useful types of silk, and as they are not mammals, there are almost no issues raised regarding "animal rights."[364]

The very word "insect" implies a distance and has become synonymous with negligible importance in human language. The play of living matter made visible and magnified on Oda's plinth, simultaneously repels and allures my gaze, at once fantastic and threatening as it writhes and rotates before my eyes. This solitary figure assumes a new kind of

[362] Oda.
[363] *Ibid.*
[364] *Ibid.*

Figure 27: Still from Kumi Oda, *Circle of Silk* (2016), 9 mins. 20 secs. video. Courtesy: the artist

Figure 28: Still from Kumi Oda, *Circle of Silk* (2016), 9 mins. 20 secs. video. Courtesy: the artist

difference that I cannot simply squish with the heel of my boot. It gracefully moves its supple body whilst undergoing a phenomenal increase in size and colour – from brown to white. Unable to fly and now without any camouflage, these worms are now completely indefensible against predators (figure 27). They rely on captivity for survival. Begging to be touched yet repulsing my stomach, the seeming freedom of this insect (a paradox I know as it is clearly a specimen on view for the camera) takes me beyond my human frames to imagine the infinite possibilities in existence in the world.

Details normally unavailable – although I am not actually sure if I ever have seen a silkworm in real life – are made clear and provoke my curiosity (figure 28). I am pulled in to look closer yet

pushed away in arrogance as its gelatinous features remain indiscernible. Yet perhaps my ignorance does the inchoate worm a favour, as I remain unable to perform a violent over-reading and categorisation to differentiate this being from myself or from anyone or -thing else. The exposed naked flesh of the larva laced with delicate markings seems softly penetrable on all sides. One struggles to resist the uncanny comparison of this autonomous being to the vulnerable human phallus. However, the true sexual identity of this worm remains obscured from my sight. These marvellous insects materialise a space outside of binary oppositions where human expectations are challenged. Our gaze is allured, yet our methods of meaning-making (through language) are alienated. We are reminded when watching these radically different others of our own limits in seeing, thinking and speaking, allowing the insects to morph into a productive site of in-between-ness where new possibilities erupt.[365]

Adeline Rother writes in her article 'Becoming Zoö-curious: Reading sexual differences in the field of animal life':

> Insects (we need to get close to observe them) present us with reproductive morphologies and markings that are strangely provocative, yet stunningly dissimilar to the sexual categories we impose upon ourselves. Insects provide us with an obscure impression of eroticism without confirming our expectation of where sex is, of how it must be parceled out.[366]

This weirdly erotic figure, with its pulsating curves, confuses my sight: should I be aroused or unsettled? I cannot quite put my finger on what I am seeing. Furthermore, the genitalia remain invisible despite this silkworm's magnification, its gender a mystery until after metamorphosis, when it becomes a new creature entirely. Like the octopus with his sex organ at the tip of his arm, the hyper-fertile termite queen, or the third sex of the sterile female worker bee, this gender ambiguous creature challenges human conceptions of sexual and gender normativity.[367] The solitary silkworm suggests at an erotic possibility and hidden knowledge, a gender all of its own within Oda's circle. It is almost asexual and self-sufficient as it moves through one cycle of life, death, maturation and rebirth to emerge as a moth. This asexuality suggests a certain kind of immortality, and the pale

[365] Here I appropriate Rosi Braidotti phrase "in-between-ness" which she uses in her chapter 'Met(r)amorphoses' in *Metamorphoses,* pp.117-171.
[366] Rother, p.88.
[367] *Ibid.*

Figure 29: Still from Kumi Oda, *Circle of Silk,* (2016), 9 mins. 20 secs. video. Courtesy: the artist.

Figure 30: Still from Kumi Oda, *Circle of Silk,* (2016), 9 mins. 20 secs. video. Courtesy: the artist.

golden tint of the moth articulates a luxury connoting a regal status (figure 29).[368] Yet, this blooming to complete self-expression remains tragically out of reach for most, this life cycle selfishly manipulated by humans (figure 30).

This silkworm evades the human binaries of male or female, a- or bisexual, self or other, and even life or death. It instead possesses a sexuality, a gender and an identity all of its own. The silkworm spins a death shroud for itself, concealing its shape-shifting ability within an impenetrable prison, inside of which unfathomable changes occur. In doing so, the minuscule worm provides the means for its future self to come into being. The insect presents an unimaginable generosity and acknowledgement for an other, which we humans cannot even oversee from the outside. Its transformative capacities and admirable selflessness leave us in awe; the human anthropocentric drive to appropriate and enhance, or control and eliminate that which we do not understand is stimulated.

Silkworms are now bred in factories, in which they are housed in antiseptic rooms and raised on artificial diets.[369] Oda's aesthetic choices in his presentation of the insect echoes this captivity, with a sterile, pristine backdrop and wooden supports to guide the silkworm's movements. Here, the insect seems to confound notions of nature and culture, an animal transposed into a manmade setting. However, the rotating wooden cylinders provide an ideal base to observe the fascinating growth and transformations the worm independently moves through, granting it a unicity normally denied in overpopulated farms. Now on view as itself, growing, spinning and metamorphosing for itself, we can marvel at this animal's self-sufficiency.

Yet this selfhood is denied to the common silkworm, now evolved into a species existing solely for our use and consumption. The observatory view of the worm on a pedestal as specimen demonstrates this status. These tiny helpless critters have unwittingly acquired high-economic importance, for which they will never reap the rewards.[370] We prize the protein fibre silk, appropriating its biological function as a "true cocoon." For Jules Michelet silk becomes a second skin, "a living tissue that embraces willingly the living person."[371] The supple strength of silk has turned it into a luxury commodity sought across continents. Silkworms are almost the sole producers

[368] Erika Mae Olbricht writes a very interesting chapter on the diverging associations of silkworms and luxury, and bees and labour, in her chapter 'Made without Hands: The Representation of Labour in Early Modern Silkworm and Beekeeping Manuals' in Brown, pp.223-241. She contrasts the voracious and insatiable appetite of silkworms as greedy consumers used in the manufacture of luxurious commodities, to the honest and modest labour of bees, who become models for their keepers.

[369] See also Kumi Oda's film interview with a sustainable Japanese silk farmer who contrastingly raises his silkworms with care and affection, mourning the deaths of the silkworms when they leave his farm. *Silkworm Farming,* 5 mins., 11 secs., short film/interview, (2016), available: http://kumioda.xyz/circle-of-silk.html, [accessed 30 January 2019].

[370] Haraway, *Species.*

[371] Michelet, para.189.

of silk, unwittingly powering a multi-billion-dollar business, which extends into the fashion, medical, military, cosmetic and security industries.[372] Genetic experiments are continuously being carried out to develop more useful types of silk, entangling the human-silk/worm relationship even more inextricably.[373]

Kumi Oda asks: "Where do they belong and what is their future?" as his film comes to an end.[374] My instinctive answer would be that they belong to us and that their future is one dependent upon our own. These are what Haraway call *Companion Species* raised by us, for us, and totally dependent on us.[375] Oda describes how silkworms are the perfect example of the "beneficial" animal, which unlike the harmful ones we exterminate, are improved and enhanced for our own purpose. But what kind of future would silkworms face without us?[376] With the development of new synthetic materials such as Bolt Threads, with the ability to replicate silk sustainably, do silkworms face total extinction as their use-value is eliminated?[377] Might they be able to re-adapt themselves to the wild? Or is there another way we could relate to other species rather than through this self-serving lens?

[372] Current research focuses on the genetic engineering of silkworms because they are cheap, easy to reproduce on schedule and can be used for medical purposes, by changing the form of the silk protein. The antennas of male silk moths are being adapted as biosensors through the expression of a specific receptor gene originally used to sense the pheromones of females. Technology has also been adapted for drug and bomb detection in airports, and possibly for antiterrorism measures in the near future. Cosmetic companies have silkworms in line to replace mice for toxicity tests. Kraig Biocraft Laboratories is one of the largest manufacturers of 'synthetic spider silk', where silkworms produce a hybrid silk, containing the stronger properties of spider silk for industrial purposes, spiders being almost impossible to farm due to their tendency to eat one another. See 'Spider Silk', *Kraig Biocraft Laboratories,* available: https://www.kraiglabs.com/spider-silk/, [accessed 17/09/19].

[373] Spider silk is strong, biocompatible and biodegradable. It is a protein-based material that does not appear to cause a strong immune, allergic or inflammatory reaction. With the recent development of recombinant spider silk, the race has been on to find ways of harnessing its remarkable qualities. The Nottingham [University] research team has shown that their technique can be used to create a biodegradable mesh which can do two jobs at once. It can replace the extracellular matrix that our own cells generate, to accelerate the growth of the new tissue. It can also be used for the slow release of antibiotics. University of Nottingham, 'Antibiotic spider silk for drug delivery, regenerative medicine and wound healing' in *Science Daily,* (14 January 2017), available:
https://www.sciencedaily.com/releases/2017/01/170104103533.htm, [accessed 9 September 2019.].
With such scientific advancements the capacity for humans to literally become-with silkworms, seems imminent. See Haraway, *Species*, p.4 for her explanation that "to be one is always to *become with* many."

[374] Oda, *Circle.*

[375] Donna J. Haraway, 'The Companion Species Manifesto' in *Manifestly Haraway,* (Minneapolis: University of Minnesota Press, 2016), pp.91-198. See also *When Species Meet.*

[376] Oda, *Circle.*

[377] See *Bolt threads,* available: https://boltthreads.com/ [accessed 4 January 2019].

Figure 31: Candice Lin, *The Worm Husband (Our Father),* (2016). Silkworms, tank, glazed porcelain, plaster and heating mechanism, miscellaneous plant material. 61 × 31 × 150cm. Commissioned by Gasworks. Courtesy: the artist. Photo: Andy Keate.

(Re)-appropriating Bodies

In September 2016, the South London-based gallery Gasworks opened a show by Candice Lin (b.1979) entitled *A Body Reduced to Brilliant Colour*.[378] At once a living and decaying exhibition of live matter that developed a powerful stench, it explored how histories of slavery and colonialism have been shaped by human attraction to particular colours, tastes, textures and drugs, tracing the materialist urges at the root of colonial violence. Lin unwillingly subjected colonies of insects to captivity and disciplinary practices in this exhibition, implicating herself as a kind of slave-owner or punisher.[379] *The Worm Husband (Our Father)* (2016) was a rectangular terrarium tank, containing miscellaneous plant material growing around a light-turquoise porcelain sculpture, which spelt out the opening lines of the Lord's Prayer in Formosan (figure 31).[380]

Lin wanted to demonstrate how both language and religion have been used as educational or disciplinary ways of indoctrinating bodies, but in *The Worm Husband (Our Father)* this process is reversed. Living amidst the green mossy flora in the shadow cast by the nonsensical ceramic doctrine, was a colony of silkworms (figure 32). Lin hoped the insects would spin their cocoons in the spaces between the letters, coating the Lord's Prayer with a silky, milky adornment, (re)appropriating the structure with their own matter.[381] The cocoon marking the transformative moment of metamorphosis, *The Worm Husband (Our Father)* could suggest at a possible reversal of previous colonial violences against others through language and religion, as the once agency-less and discrepant bodies of the worms, retake control of what they had previously been denied forming a new relationship of mutability to their colonial history. And when the moths finally hatch, bodies ordinarily not even granted a place in these colonial narratives, flutter onto, and recolonise the scene.

[378] Gasworks, *Candice Lin: A Body Reduced to Brilliant Colour,* Exhibition Catalogue, available: https://www.gasworks.org.uk/exhibitions/candice-lin-a-body-reduced-to-brilliant-colour-2016-09-22/, [accessed 24 October 2019].
[379] Candice Lin, 'A body reduced to brilliant colour', short film/interview, (2016), available: https://vimeo.com/192544862, [accessed 30 January 2019].
[380] Formosan was a language invented by George Psalmanazar, a Frenchman who claimed to be a native of Formosa (present-day Taiwan) during a trip to the British Isles in the early eighteenth century. Psalmanazar exploited words at a time when race was very much linked to language and culture rather than phenotypes, manipulating its capacities to develop his own false orientalist persona. *Ibid.*
[381] *Ibid.*

Figure 32: Candice Lin, *The Worm Husband (Our Father),* (2016). Silkworms, tank, glazed porcelain, plaster and heating mechanism, miscellaneous plant material. 61 × 31 × 150cm. Commissioned by Gasworks. Courtesy: the artist. Photo: Andy Keate.

Animals have traditionally been separated from humans for their supposed lack of language and rationality. Lin's artwork suggests that instead of focussing on the human abilities that animals do not have, we might instead look at the powers that they have that we do not. The silent bodies of the silk/worms, a commodity passively exchanged between powers in the human quest for imperialism, in Lin's artwork, are provided with a space to transform the materials, language and religion at the root of colonialism with their powers of metamorphosis. Running contrary to notions of unicity and individual integrity of identity at the heart of the Judaeo-Christian tradition, metamorphosis challenges permanence, stability and completeness with flux, mutability and change. The principle of organic vitality, it suggests at the undeniable changing ideas of person and personhood we all experience, within ourselves and in our wider existence. Metamorphosis reminds us that the universe is unceasingly progenitive, multiple and fluid, flux and continual making being the prime movers of nature.[382] With its powers to disrupt the traditional borders of the body through self-transformation, the silk/worm becomes a shape-shifting symbol of protean polymorphy, intricate connection and the irruption of the marvellous at moments of transition and confluence. We can begin to consider the figure of the silk/worm as one capable of breaking and

[382] Marina Warner, *Fantastic Metamorphoses, Other Worlds: Ways of Telling the Self,* (Oxford: Oxford University Press, 2002), pp.2-11.

transforming rules previously demarcated, unravelling new shapes and new forms to influence how we might relate to the world around us.

The silkworm's metamorphosis of me, from me, by me and into me, is a performance of self-evolution and conservation, which speaks of an internal and inherent acceptance for and knowledge of change and otherness. The silk/worm weaves its cocoon for the purpose of a new self and future life: its transformation into the moth provides the physical body to lay the eggs, after which it will die, thus providing the vessel for birth and the continuation of the life cycle. The moth, nor the worm, will never know its (their?) offspring. Yet from the very outset, the silk/worm expends all of its energies for these unknowable others to come.

Unconditional Hospitality

Host to the unforeseeable and unknowable stranger to come, the silk/worm symbolises to me Derrida's *arrivant.* Pure hospitality "worthy" of "its name" must be "unconditional", awaiting the arrival of an integral and absolute other and remaining outside of any cycle of exchange and reciprocity. It must be infinitely deferred to some (im)possible, unknowable future to come, necessarily remaining out of reach so as to be able to continuously guide our actions.[383] Acting at once as host, guest and parasite, the silk/worm dissolves the boundaries between self and other, inside and outside, past, present and future, and birth, maturation and death. It embodies the notion that we as beings are never integral, impermeable, unique bodies, but diverse and multiple ensembles wrought with differences that constantly evolve and grow. Silk/worms infinitely defer any fixity or stability. As we witness the emergence of more and more real bodies into our societies, ones that break down the claustrophobic categories of identity previously fixed in place, the fluidity of silk/worms, dissolving all boundaries with their secretions, present a model we might learn from. They evade traditional categorisation as they spin their way from one form to another, always without any expectation of a return. We can never pin down their truth as one or the other, but merely look on in awe as silk/worms break all the rules that we know.

Derrida explores the limits to human (in)sight and feeble methods of categorisation when recollecting his childhood pastime of sericulture in 'A Silkworm of One's Own' ('*Un Ver à Soie'*). Derrida's title plays with the double meanings found in his French language – a turn towards oneself, emphasising the silk/worm as a figure of hospitality or auto-affection. The bodies of Derrida's silkworms evade anthropocentric notions of discrete individuated selves and escape traditional naming categories. He calls them both caterpillars and worms and is unable to distinguish their heads from their tails, the part from the whole, nor their sex or gender. The philosopher describes

[383] See Jacques Derrida, 'Hostipitality'.

the indistinguishable appearance of these "voracious little creatures", whose mouths you "could hardly see", yet their desire to "nourish their secretion" speaking of an internal knowledge and drive towards the future.[384] Describing "a secretion […as] what separates, discerns, dissociates, dissolves the bond, holds the secret", Derrida attributes them a hidden and internal knowledge, a working towards something to come which escapes human identification.[385]

Through the benefit of hindsight and entomological study, the philosopher explains how "the silk-producing glands of the caterpillar can be labial or salivary, but also rectal." The sentence "milk become thread […] the extruded saliva of a very fine sperm, shiny, gleaming, the miracle of feminine ejaculation" confuses and confounds human gender and bodily norms.[386] For Derrida, sexual difference is more a question of resemblance rather than contrast, a constant fluid exchange moving from masculine to feminine. Always interstitial, it cannot be fixed nor stabilised at either pole. And laying testament to Derrida's difficulties in identifying his silkworms' sex, the philosopher claims sexual difference offers itself up only to be *read*, leaving traces to be interpreted, deciphered and decrypted, *never seen.*[387] Always dependent on the interpretation of the other, Derrida's concept of the trace obliges a relational exchange, opening up the possibility of infinite hospitality for an impossible *Xenos* (stranger).[388] The silk/worm, an ambiguous figure both in terms of gender and through its metamorphic capacities, demonstrates such hospitality. It is placed in between human dualisms of male and female and self and other, embodying a protean space of indeterminacy which breaks the equivalence between seeing and truth. The silkworm's materiality offers up opportunity for radical new readings and interpretations of gender and selfhood which reach beyond the limits of visibility, nameability and rationality, unravelling anthropocentric control over otherness.

A silkworm simultaneously dies and ripens whilst giving birth to itself. Whilst the silkworm re-engenders itself "in the spinning of its filiation […] beyond any sexual difference or rather any duality of the sexes, and even beyond any coupling" it is Derrida the overlooking adolescent, trying to identify and mark its gender and its actions, who becomes the true beast.[389] Questioning both human sight and our dogmatic assertion of truths based on the marking out of oppositions, Derrida instead makes clear that it is the violence of the human drive to name and fix all visible identities against one another that must be reconsidered. Rother writes that for Derrida, "the silkworm

[384] Derrida, 'Silkworm', p.88.
[385] *Ibid*., 88-89.
[386] *Ibid*.
[387] See Derrida, 'Ants' [*Fourmis*], in *Reading Cixous Writing, The Oxford Literary Review,* ed. by Martin McQuillan, vol.24 (2002) pp.17-42, p.21.
[388] See Derrida *Of Grammatology* and 'Hostipitality'.
[389] Derrida, 'Silkworm'*,* p.90. See also note from translator David Wills in *The Animal That Therefore I Am,* p.162, n.5.

doesn't mean or represent *anything,* but introduces a shift in methodological sensibility around the matter of sexual difference." It is only when the gender ambiguous worm with its capacities for metamorphosis is "transposed into a language" that it can bear any significance to human understanding.[390] But in this process, as the human viewer is allured by the silkworm's differences to their own understanding of being, they are alienated from it further as they impose their language structures onto it. It seems that it is only when we appreciate animal others in themselves – in a space of *unrationality* where their otherness cannot be encased by our categories – that they are able to influence how we understand the world around us.

As the worms spin their cocoons their bodies too move beyond and outside of the material boundaries of physicality. In his limited visual observations, restricted solely to human sight not adapted to the microscopic details of the insect world, Derrida now becomes aware of the "infinite distance of the animal […] so foreign and yet so close in its incalculable distance."[391] Derrida later says in *The Animal That Therefore I Am*: "These relations are at once close and abyssal, and they can never be totally objectified."[392] In its production of silk, outside of itself, that would remain forever a part of itself, a silkworm produces something that is no other than itself, projecting from inside itself something outside of itself that would soon envelope itself entirely. Derrida recognises sericulture as not "man's thing, not a thing belonging to the man raising his silkworms. It was the culture of the silkworm *qua* silkworm."[393] Derrida displaces something proper to man – that of sericulture – onto the silk/worm, identifying the worm's own production of work outside of itself and yet from which it cannot be separated. This worm/moth/commodity blurs the categories of nature and culture. Derrida re-attributes the silk/worm with a culture of its own, identifying the silk spinning as the task of the individual, but one which will open up to others to come. The silk/worm's ambiguous gender represents the desire for a sex or sexuality that would be free from any identifying stamp; it is a pure form of self- or silk-cultivation. And this sexual diversity implies a greater diversity of life – both human and non – at large.

Stitching Together

Silk/worms impose visual limitations and dissolve the categories humans use to structure the world around us. Indistinguishable, almost invisible and weaving a veil to hide themselves beneath, these insects defy human conviction in the certainty of sight and subsequent nameability

[390] Rother, p.103.
[391] Derrida, 'Silkworm', p.89.
[392] Derrida, *The Animal,* p.31.
[393] Derrida, 'Silkworm', p.89.

and knowability. Producing by themselves, with/in themselves, for themselves, yet also for another self to come, silk/worms exist for themselves and themselves alone and yet suggest at an alternative understanding of selfhood and relationality to others. Donna Haraway writes in her *Companion Species Manifesto*:

> I believe that all ethical relating, within or between species, is knit from the silk-strong thread of ongoing alertness to otherness-in-relation. We are not one, a being depends on getting together. The obligation is to ask who are present and who are emergent.[394]

Rather than unravelling the silkworm's secretions to serve our own purpose, might we instead learn from the material of this worm? Might the threads of the silk and the materiality of this insect's form remind us of our inextricable ties to this companion species, one now totally dependent on us for survival due to its genetic changes through captivity? Might we consider the consequences of our actions and keep in mind those yet to come? Through an exploration of the silk/worm in itself (rather than as one of a multitude used in silk production), holding it in regard, becoming curious and paying attention to individual intricacies, we might begin to change our relationship towards these tiny animals, from one of anthropocentric exploitation to one of respect.

The artworks of both Candice Lin and Kumi Oda demonstrate the extraordinary capacities of these insects, and possible alternative narratives to the ones humans typically assign them. Embracing the radical otherness of silk/worms whilst showcasing their capacities for transformation, both works suggest at powers for metamorphosis upon human categorisation. The silk/worm reminds us of the interdependent yet always independent selfhood of all creatures on Earth. Only by recognising interspecies dependencies will humans be able to consider new ideas for relating to other beings. Like the silk/worm, might we not open up hospitable places and spaces for emergent others, learning from this microscopic matter how to stitch together new meanings for these others to come?

[394] Haraway, 'Companion Species', p.141.

Chapter 3. Spiders and Tomás Saraceno: Interfacing Nature and Culture Through Art and Science

Social Practice for Future Coexistence

Tomás Saraceno's (b.1973) installations weave his human viewers into material webs.[395] The architect come artist constructs immersive art installations which provoke consideration of the human terrestrial position and affinities beyond the human realm. One simultaneously enters the microcosmic world of the spider in its web, and the macrocosmic world of our galactic universe (figure 33). Two webs whose patterns we still lack the language to fully explicate, Saraceno invites humans to consider what could be learnt from exploring these worlds in parallel. His work reaches beyond typical human limitations to explore new ways of inhabiting and sensing space. The artist collaborates with spider/webs in innovative ways, enhancing their capacities as a *genus*, allowing them to conduct his practice as a whole, thus provoking human reflection on our own abilities when we encounter his artwork. A typically solitary animal, certain species of spider do in rare instances come together socially. Whether collaborating as they build their webs or manipulating the Earth's electromagnetic fields to lift them in "ballooning" flight[396], these instances of collectivity display degrees of sensibility and resonance, an "attunement" and hence proximity to the forces of others within their environment.[397] I suggest that Saraceno's artworks enable the forces of nonhumans – in parallel with the more-than-human cosmos – to permeate his human viewers. Entities from different times and scales are entangled within a collaborative web where bodies and minds become congruent, forging new connections and enabling the emergence of imagined possibilities.

Becoming multi-temporal and/or multi-societal, the physically durable and resilient webbed habitats of spiders provide tangible, yet fragile models against our own more

[395] This chapter was published: Elizabeth Atkinson, 'Tomás Saraceno: Interfacing nature and culture through art and science' in *Antennae,* Issue 48, (Summer 2019), pp.53-71.

[396] "Ballooning, sometimes called kiting, is a process by which spiders, and some other small invertebrates, move through the air by releasing one or more gossamer threads to catch the wind, causing them to become airborne at the mercy of air currents and potentially electric currents." 'Ballooning (spider)', *Wikipedia.org,* (n.d.) available: https://en.wikipedia.org/wiki/Ballooning_(spider), [accessed 9 September 2019]. Ballooning spiders, *Stegodyphus dumicola* are normally a solitary species. However, they come together to collectively send out long sticky threads into the wind. As the wind mixes the threads, a meshed sail is produced that can lift all the spiders at once. Sasha Hildegaard Engelmann, 'The Cosmological Aesthetics of Tomás Saraceno's Atmospheric Experiments', (unpublished doctoral dissertation, University of Oxford, 2016), p.28.

[397] Here I apply Timothy Morton's explanation of "attunement", this "being precisely how the mind becomes congruent with an object." *Hyperobjects,* p.171.

Figure 33: Tomás Saraceno, *Our Interplanetary Bodies*, (2017), Photography by Studio Tomás Saraceno,© Andrea Rossetti.

mysterious phenomena of social functioning. Saraceno's *Hybrid Webs* and more recent *Webs of At-ten(sion)* are metaphors for collective communication and social cooperation (figure 34). Donna Haraway emphasises the need for us to re-entangle ourselves with nature. She calls for a theoretical move into what she names *the Chthulucene*. Inspired by the spidery *Pimoa cthulhu*, this is a tentacular moment entangling "myriad temporalities and spatialities and myriad intra-active entities-in-assemblages including the more-than-human, other-than-human, inhuman and human-as-humus."[398] "Making kin" in Haraway's *Chthulucene* is about recognising and embracing one's coexistence with even the most different of others.[399] Saraceno's work explores such coexistence. By imitating but also developing spider examples of social functioning within his practice as a whole, he suggests possibilities as to how humans might change their relationship to the environment and to each other. Spiders and their webs interconnect humans and animals, nature and culture, biology and technology, the terrestrial and cosmological, and art and science. Saraceno uses the natural example of spiders to develop a space where binary dualisms no longer exist, advancing and exploring ways of thinking and being in parallel to weave together possibilities for interspecies futures.

[398] Haraway, *Trouble,* p.101.
[399] *Ibid*., p.1.

Figure 34: Tomás Saraceno, *Webs of At-ten(sion)*, (2018), *On Air: Carte Blanche*, Palais de Tokyo, Paris, photo by author.

Spiders weave their webs anew nocturnally, capturing both the air and other lifeforms in the tensions of their resilient threads. They often eat these fragile structures, recycling the silk to generate sustenance to repair or recast the webs.[400] The almost blind spider's dependence on physical sensations – its tendrils reaching across time and space sensitive to tremors in the atmosphere and vibrations in its web – shows how its "knowledge [is] tuned to resonance, not to dichotomy."[401] In his exploration of the material ecologies of spiders, Saraceno provides his viewers with the chance to observe these creatures in action and so imagine how we might live if we were to model their behaviour. Now humans and our actions have become directly implicated in planetary crisis, such lessons seem paramount if we, and the species with whom we share the planet, are to sustain our lives into the future. By pushing art to its limits, advancing spider science into new realms, and developing new models for human earth dwelling and air travel, Saraceno looks beyond the limits humans normally fix in place to imagine possibilities for interspecies futures.

Embodying Spiders

Spiders are familiar creatures, sharing our homes and adorning our walls with their webs. As Jules Michelet writes, "they seem to observe us" with their eight panoramic eyes.[402] But spider-human relationships have become fraught with fear, arachnophobia being a trait many of us share. Their eight-limbed forms astound us with the capacity to defy gravity, crawling both vertically and horizontally, and their flying capabilities remain a mysterious phenomenon. A typically solitary spider, the black widow (*Latrodectus mactans*) perhaps exemplifies the human-spider stereotype. Famed for mercilessly eating the male after fertilisation of her eggs, the female has come to represent to us that most fiercely independent other.[403] However, this reputation is one skewed with human projections, the instances of sexual cannibalism in fact remaining rare. The black widow with her anthropomorphic name demonstrates how humans attempt to encase animals within our own categories.[404] However, this species is but one of an estimated 43,000 spider families, within which there exists only a few poisonous to humans and around 40 social types.[405] Spiders remain alienated from human understanding, masked beneath our projections of fear and disgust. In fact, these tiny yet complex arachnids should allure us with their more resourceful capacities of living and moving in space.

[400] Ed Nieuwenhuys in Tomás Saraceno*, 14 Billions (Working Title),* ed. by Sara Arrhenius and Tomás Saraceno, (Milan: Skira Editore, 2011), Exhibition Catalogue, p.6.
[401] Haraway, *Simians,* pp.194-5.
[402] Michelet, para.228.
[403] For greater discussion of the symbolic significance of sexual cannibalism, see chapter two.
[404] This naming also conveys certain human racist and sexist connotations.
[405] Engelmann, *Cosmological*, p.35, n.15.

The eyesight of spiders, despite their octocular vision, remains partial. Their eyes resting on the lower side of their body makes them unable to see what looms above. Yet in the weaving of their webs, sight becomes irrelevant. Mostly spinning at night, spiders depend on their capacity to feel and to sense, rather than to see. They measure atmospheric pressure, wind currents, the forces of gravity and light orientation – most often from the moon and stars – using their own body weight or an internal clock to position themselves in relation to these cues.[406] Spiders situate themselves and their web-weaving knowledge *with* the knowledges of their surroundings, mediating and responding to what they feel so as to immerse themselves and become one with the natural world, rather than objectifying and positioning themselves outside of and against it. For spiders,

> The air is highly viscous […]; for a human, an analogous situation would be building a web of elastic ropes under water. You must instead depend on the vagaries of the wind; you will have to launch new lines, allowing their tips to float away on irregular air currents.[407]

Much like the depths of the sea for an octopus, spiders negotiate their space in volumes which we can only imagine if we venture into an uninhabitable element.

Situating Spider Knowledges

In her 1987 chapter 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective', Donna Haraway investigates "the curious and inescapable term 'objectivity.'" She critiques traditional notions of universal objectivity, claiming these to have been established by an "imagined 'they' [of] masculinist scientists and philosophers" who align themselves against the "imagined 'we' […] the embodied others, who are not allowed *not* to have a body, a finite point of view." Through the implementation of what she names "disembodied scientific objectivity", Haraway describes how "all truths [including those of gender, race, species

[406] Dr Thomas Nørgaard correspondence with Tomás Saraceno, published in *14 Billions,* p.34. Saraceno specifically manipulates their orientation via gravity in the periodic rotation of his *Hybrid Webs* and plans to send several species of spiders into space to investigate how they adapt their web spinning to a weightless world.

[407] Tomás Saraceno quoted in Esther Schipper, *How to Entangle the Universe in a Spider's Web,* Exhibition Catalogue, (n.d.), available: https://www.estherschipper.com/exhibitions/473/, [accessed 28 August 2018].
Spiders could be compared to the multidimensional *Vamypyroteuthis Infernalis* in Vilém Flusser and Louis Bec's fantastical 1987 treatise on cephalopods: "whereas we think linearly ('rightly') it thinks circularly ('eccentrically'). In turn, our respective worlds reflect the differences between our thinking. Ours is flat and for us, bodies are simply bulging surfaces (mountains.) It lives in a water container, of which the seabed constitutes only one of its walls […] When it soars, it does not do so from a surface into space but rather it shoots into volumes […] It bores through watery volumes like a screw." p.42.

and sexuality] become warp-speed effects in a hyper-real place of simulations" in a "play of signifiers in a cosmic force field." Haraway instead promotes social constructionist arguments "for *all* forms of knowledge claims" where "no insider's perspective is privileged" and "inside-outside boundaries" collapse. Binary distinctions are revealed as toxic "power moves, not moves towards truth."[408] Through collaboration with spiders in his artistic practice, Saraceno explores and promotes spider knowledges, combining these with human knowledges to develop innovative webbed-works which push beyond anthropocentric principles grounded upon truth, singularity and sight. He then invites his human viewers into these at once alluring and alienating spaces.

Haraway's feminism allows fragmented histories to sit together within webs woven from tendrils tuned to the resonances of others. Despite being muddled amongst one another, these fragments of identity are grounded in specificity and difference. Constantly attuned to their surroundings, spiders retain their own specificity whilst simultaneously becoming one with their atmosphere and prey. Spiders merge their own knowledge each night with the conditions of their particular habitat in that specific moment. They demonstrate a degree of openness and flexibility to change *with* others, critically positioning themselves as moments of situated knowledges. Unlike the relativism inherent to totalising claims of vision most frequent amongst *Homo sapiens*, Haraway's alternative is "partial, locatable, critical knowledges sustaining the possibility of webs of connection called solidarity in politics and shared conversations in epistemology." With Haraway's knowledges comes an inherent mobility: "feminist embodiment resists fixation and is insatiably curious about the webs of differential positioning." Her version of objectivity "privileges contestation, deconstruction, passionate construction, webbed connections, and hope for transformation of systems of knowledge and ways of seeing."[409] As partially blind spiders continuously recast, repair and recycle their fragile webs of silk, they demonstrate the capacities for attunement and transformation that Haraway asks for.

"A commitment to mobile positioning and to passionate detachment" means not trying to recognise oneself as a concrete, impermeable, identified self, but rather contingent and open to others, a split self, claims Haraway.[410] This creates a multidimensional topography of subjectivity, one with multidimensional vision. With their eight eyes, eight limbs, and capacity to extend their bodies across time and space creating three-dimensional worlds, spider/webs embody such multidimensionality. Their "imperfect stitching together of selfhood" makes the knowing self "*therefore* able to join with another to see together without claiming to be another."[411] Spiders cast

[408] Haraway, *Simians,* pp.183-4.
[409] *Ibid.,* pp.190-2.
[410] *Ibid.,* p.192.
[411] *Ibid.,* p.193.

themselves through the atmosphere, never claiming space as their own, but momentarily inhabiting and adapting themselves to it in a movement of self-expression. They negotiate change and sense fluctuations within specific situations. As in Haraway's description of critical positioning, this situation depends upon mediation and implies response-ability for enabling practices. The natural sense-abilities of spiders allow them to inhabit themselves with/in the environment rather than position themselves outside as a disembodied observer.

According to philosopher Henri Lefebvre, the spider's web is not an "abstract space", not composed of such "separate objects as its body, its secretory glands and its legs, the things to which it attaches its webs, the strands of silk making up that web, the flies that serve as its prey."[412] These are instead, carefully calculated, totalisable architectures, woven with the body as one *Umwelt*.[413] Never products of "blind instinct" nor "nature", spiderwebs are cast from individual threads each in tune to their surroundings and needs.[414] Within these webs lies a rationality we cannot understand nor predict. We might observe the regularity of the web, but we can never understand its regulations. In his anthropological study of *How Forests Think* towards an "anthropocentrism beyond the human", Eduardo Kohn emphasises the need to appreciate the patterns found in nature which do "not stem from the structures we humans impose on the world." These indeterminable forms, emerging from a "lower order", may in fact prove useful if we endeavour to understand them.[415] Tomás Saraceno attempts such understanding in his practice. Through imitation of spiderwebs (a method not typically adopted by biologists), the artist demystifies the workings of this micro form and applies its patterns to solve macro problems.[416]

We cannot discern where the body of the spider ends and where the web begins. Their sprawling intelligence weaves an elaborate material structure, a sensory mesh of perceptive tendrils reaching across time and space, gathering and knotting entities together, situating the spider within the world. These iridescent and resonating architectures are examples of extended and embodied cognition. The web is not only its home, shelter and fly trap but an extension of the individual

[412] Henri Lefebvre quoted in Engelmann, p.171.

[413] This being the world as it is experienced by a particular organism. Uexküll goes as far as to describe the spider's web as "fly-like", the spider and its web being so attuned in anticipation of its prey. Even if the spider and fly do not communicate with one another, the web is built so as to intercept its trajectory with exact precision. Jakob von Uexküll, 'The Theory of Meaning' in *Semiotica,* 42 (1), (1982), p.66.
This intuition of a significant other – an expression of biosemiosis – is, for Undine Sellbach, a "kind of 'animal knowing' which is not cognitive or goal-oriented, but nevertheless inter-subjective and creative." 'Performance' in Turner *et. al.,* pp.380-396, p.391.

[414] Henri Lefebvre, quoted in Engelmann, p.171.

[415] Eduardo Kohn, *How Forests Think,* (Berkeley: University of California Press, 2013), pp.182-3 and 186.

[416] Like Roger Caillois and Jean Painlevé who we met in the preceding chapters, Saraceno's approach to science is also atypical and goes against many of the expected norms of investigation and research of the day.

spider's self. This web, woven by itself, for itself, from itself and into itself, lives and vibrates. It encircles the spider whilst also forming a part of its being.

Both the sensory capacities of their bodies and the interpretative abilities of their intelligence extend and project outside of spiders' physical bodies to respond to, and incorporate the world in which they dwell. Threads almost invisible to our eyes are at once "dynamic" and "tensile", "resilient" and "fragile" writes Sasha Engelmann in her doctoral thesis *The Cosmological Aesthetics of Tomás Saraceno's Atmospheric Experiments*. These threads intermittently connect with their environmental surroundings, forming strong yet fleeting connections with and within space. These are not networks of predefined relations, but webs of entanglement attuned to a specific time and place. "The web is a pattern, a mesh, a platform of possibility", writes Engelmann.[417] The strands of the web become an opportunity for the spider to connect with the world, catching its prey or lifting itself in flight. And when displayed as artworks by Saraceno, these threads propose possibilities for human ways of being. Viewers enter webbed worlds where traditional binary divisions dissolve and webbed connections tuned to *resonance* are woven. Interspecies relationships are formed whilst the Earth and the Universe align. In so doing, this platform of possibility becomes an interface.

Haraway states how "both inheriting and also reweaving ongoing webs of affective and material relationships are the stakes; such webs [being] necessary for staying with the trouble."[418] For her vision of multispecies futures, Haraway does not call for the overthrowal of human culture in favour of nature, but rather for humans to reconstruct their ways of being, carefully weaving themselves *into* the lives of other species to create more sustainable material ecologies of coexistence.[419] By demonstrating Arachnid feats of situated knowledges in his artworks, entangling humans and spiders in his exhibitions to coexist and learn together, Saraceno weaves together nature and culture, humans and nonhumans, and science and art. His artworks become surreal, material figurations for imagining futures of coexistence (figure 35).

[417] Engelmann, pp. 172 and 181. Here Engelmann applies Tim Ingold's elucidation of the differences between networks and webs in *Being Alive: Essays on Movement, Knowledge and Description (*Abingdon, Oxon: Routledge, 2011) p.85.
[418] Haraway, *Trouble,* p.216, n.4.
[419] See Haraway's final chapter 'The Camille Stories: Children of Compost' in *Trouble,* pp.134-168.

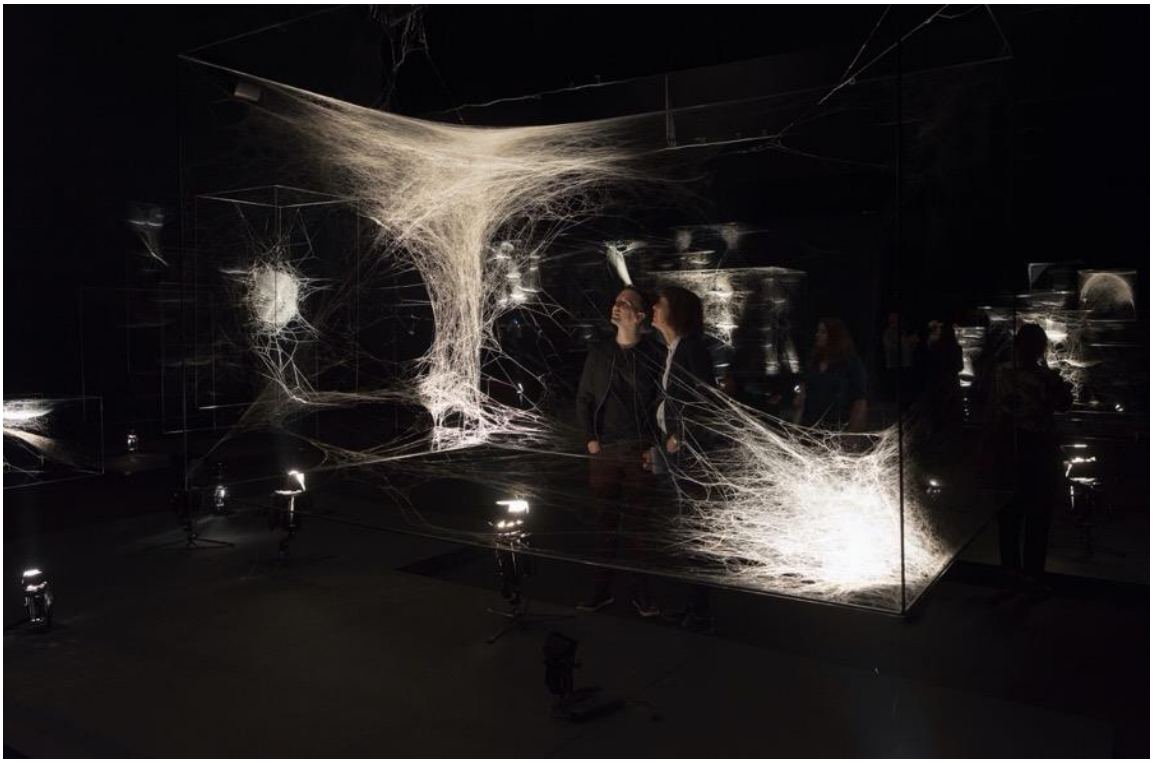

Figure 35: Tomás Saraceno, *Webs of At-ten(sion)*, (2018), *On Air: Carte Blanche*, Palais de Tokyo, Paris. Made up of 76 hybrid spider web sculptures interwoven by different spider species. Photography by Studio Tomás Saraceno, © Andrea Rossetti.

Spiderwebs in Studio Saraceno

Spider silk is the strongest material on Earth, able to hold the weight of a fully loaded Airbus. Yet it is also extremely thin, sometimes measuring only 0.001 millimetres in thickness. Spider threads in their multitudes are present everywhere whilst (almost) not being seen anywhere. [420] They have been spotted in altitudes of 10,000 metres from aeroplanes and it is known that they are transferred with the winds over the Himalayan mountains. Stronger than steel and stretchier than nylon, and having evolved over 400 million years, present-day spiderwebs are structures efficiently engineered by nature.[421] Spiders use their silk to weave their webs, mummify their prey, as a jumping escape route, to transfer semen, as draglines marked with pheromones and as a shelter into which they can retreat. The webs themselves act as temporary homes where spiders can feed, mate, and maybe even play music through the rapid vibrations of the strings.[422]

[420] Spiderwebs leave no trace in the fossil record cementing their truly ephemeral quality. Nieuwenhuys in *14 Billions,* p.6.

[421] Spider silk has a strength five times higher than steel, and only breaks at between 2-4 times its length. Tomás Saraceno in *14 Billions,* p.6.

[422] Saraceno has worked specifically with the sonic vibrations of spiderwebs, devising instruments to amplify their notes and inviting musicians to play with them in jam sessions. See Tomás Saraceno, *Arachnid Orchestra. Jam Sessions,* ed. by Ute Meta Bauer and Anca Rujoiu, Exhibition Catalogue, (NTU CCA: Singapore, 2016).

The silk is produced in silk glands in the form of a liquid with a molecular weight of 30,000, but the molecular composition of silk varies from species to species. It is released from spinnerets; the liquid having polymerised into a more solid thread. Webs are fragile, easily damaged or destroyed by bad weather or the catching of prey. The old web is eaten and recycled, digested to produce more liquid silk and a new web is constructed once more. The cutting of the web is done by special digestive juices that contain enzymes rather than by any mechanical cutting. These juices also form the glue which holds the strands of silk together.[423] This reciprocal exchange of internal fluids for external functionality, recycling an exterior to nourish the interior and de- and re-constructing their bodies and homes demonstrates a natural resourcefulness. Spiders turn inside out our beliefs about physical boundaries, their self-individuated forms attuned to their surroundings as they create intricate new worlds.

Tomás Saraceno began actively collaborating with spiders in 2008.[424] This project was initially an investigation into the comparison made by scientists between the structure of the universe and that of an organic web. Like the rationality inherent to the spiderweb, our cosmos is another web of patterns which undermine our rational limits, threatening us with a material unrationality. Astronomers propose the comparison between our universe and a complex spiderweb in which groups of stars and other matter are strung like shining bodies of water along invisible strands.[425] Furthermore, in 2006 the New Hubble telescope provided images showing a large massive galaxy under assembly as a result of smaller galaxies merging. Nicknamed the "Spiderweb", it is located in the Southern Constellation of Hydra (the water snake) and is one of the most massive star clusters known. The telescope has observed how larger galaxies act as webs, sucking smaller galaxies along threads of dark matter into cavernous black holes within, at speeds of several hundred kilometres per second, from a distance of more than a hundred light years. Like a spider who spins her web to weave a trap for her prey, this large galaxy appears to be "stuffing itself with smaller galaxies caught like flies in a web of gravity." [426]

Eleanor Morgan also gives various examples of spiders as musicians, both attracted to our own human music and their own use of music during mating rituals in her book *Gossamer Days,* (Cambridge Ma.: Strange Attractor Press, 2016).

[423] Saraceno in *14 Billions,* p.6.

[424] These are Engelmann's words here, which I interpret to reflect Saraceno's own attitude. See for example p.23 of her dissertation.

[425] In 2008 Saraceno constructed an installation at Tanya Banakdor gallery, New York, entitled *Galaxies Forming Along Filaments, Like Droplets Along the Strands of a Spider's Web* a clear acknowledgement to the comparison between our cosmological structure and the organic spider's web. See the exhibition catalogue *14 Billions (Working Title)* for various in-depth discussions and evidence about the spider/cosmic web comparison and for Saraceno's own materialisation of this analogy.

[426] "The galaxy is so far away that astronomers are seeing it as it looked in the early formative years of the universe, only 2 thousand million years after the Big Bang." The ACS Science Team and Davide de Martin, 'Flies

Saraceno incorporates elements of physics, engineering, and aeronautics into his interactive and evolving art structures. Taking and translating web geometries, the artist positions spiders as an interface between art and science. He provides structures for both his artworks and advancements in scientific fields; specifically, for the artist, developments in human habitation and travel on Planet Earth. In his efforts to understand the patterns lying within the dark matter of the universe, Saraceno contributes to advances in twenty first century technologies of sensing and communication.[427] In the catalogue for his 2016 Exhibition *Reset Modernity!,* Bruno Latour writes "[r]are are the artists who have published papers with scientists because the science they had to feed on was too limited! To extend the frontier of art, Tomás first had to push the frontier of spider science." Through his investigations into spiders and their webs, "what makes the spider move and how the web reacts to its environment", Saraceno for Latour "render[s] visually discernible – what it is for any entity to have – no, I should say, to *be* its environment."[428] The artist creates figurations – taken from patterns in nature – to counter anthropocentric notions of a discrete and autonomous self. Rather, selfhood must be imagined in relation to what lies outside of it, that which is typically othered.

Saraceno's studio in East Berlin devotes 600 square metres to web-spinning spiders and houses the largest and only collection of three-dimensional webs.[429] The studio works with a wide range of species but is most often drawn towards social types. Spread across three floors, each "spider room" receives an acute and careful degree of observation. As described by Engelmann, who completed her thesis whilst working at Studio Tomás Saraceno and on a number of their projects, Saraceno and his collaborator Adrian Krell "invited" the first spiders into the studio back in 2008. She goes on, "[i]t took significant research with spider scientists like Dr Peter Jäger to develop the conditions in which the spiders would weave."[430] Saraceno sought to advance his own and his

Caught in a Spider's Web: Galaxy Caught in the making, *Astrophysical Journal letters,* Oct. 2006, printed in *14 Billions,* p.29.

[427] Engelmann, p.11.

[428] Bruno Latour, 'Saraceno's Monads and Spiders', in *Reset! Modernity* ed. by Bruno Latour (Cambridge Ma.: MIT Press, 2016), pp.205-6.

[429] Mark Rappolt, 'Tomás Saraceno' in *ArtReview,* (December 2017), available: https://artreview.com/features/ar_december_2017_feature_toms_saraceno_/, [accessed 26 June 2019]. See my earlier discussion of the 2009 project *14 Billions (Working Title)* which placed spiders in a scale model of the Venice biennale room – from there one would hope to see the relation between the spider web and the millennium simulation. The web was woven in the gallery, scanned and enlarged in 3D space so as to be accessed by humans and compared to the "cosmic webs" of the Millennium Simulation. The project was about rendering explicit a shared cosmological quality between the spider's dwelling and that of our galaxy. Crucially, the "between that eventually brought these entities into relation was a not a melting-together of the cosmic and the creaturely, but a mobilisation of their differences" "as that which relates the two as different." Engelmann, p.151.

[430] Engelmann, p.168.

studio's capacities of interspecies attunement in this process, developing his and their sensibilities to become more spider-like.

Engelmann elaborates on this nature of human/nonhuman collaboration. The fact that the spiders "ultimately did begin to weave" as a result of efforts made by Saraceno and his team is emphasised. The spiders became participants in the collaborative network of Saraceno's practice. As the studio members learnt more about the spiders and their specific life-requirements so as to develop the optimal weaving environment, the spiders reciprocally habituated themselves to the studio and its conditions.[431] This lead to the creation of several "micro-climates" with carefully adjusted humidity and lighting according to the specific needs of the individual spiders, as well as the education of studio members who collaborate with them. The studio now houses "both multiple species and a multitude of spiders whose expressiveness is the primary medium of artistic production" writes Engelmann.[432]

As the studio and the spiders become habituated to one another, Saraceno's practice itself explores cohabitation between humans and animals. His studio reverses the stereotype of spiders as alien others invading our homes, *inviting* spiders to work *with* him and share his professional space. Saraceno's close sensitivity to their needs and observation of their ways of being enacts the "specificity and difference and the loving care that people might take to learn how to see faithfully from another's point of view" that Haraway calls for.[433] Saraceno's studio recognises the specific needs of the spiders, as differentiated species and as individuals in their own rights.[434] In this regard, his practice is learning to see, or more accurately, to *feel* from the spiders' perspectives. And in so doing, Saraceno emphasises the rewards humans might reap if we were to become resonant to spiders as atmospheric artists in themselves.

[431] *Ibid.,* p.170.
[432] Sasha Hildegaard Engelmann, 'Social Spiders and hybrid webs at Studio Tomás Saraceno' in *Cultural Geographies,* vol.24 (1), (2017), pp.161-9, p.164.
[433] Haraway, *Simians,* p.190.
[434] See Engelmann's interview with Hanna Barranowska who works in the spider room at Studio Tomás Saraceno in Engelmann, 'Social', pp.164-5.

Spider Inspiration in Saraceno's Practice

Figure 36: Tomás Saraceno, *Webs of At-ten(sion)*, (2018), *On Air: Carte Blanche*, Palais de Tokyo, Paris. Made up of 76 hybrid spider web sculptures interwoven by different spider species. Photography by Studio Tomás Saraceno, © Andrea Rossetti.

Webs of At-ten(sion) "is a constellation of three-dimensional sculptures interwoven by unrelated spider species" (figure 36). Here "different sensory worlds collide to create speculative architectures" to encourage the imagination of "interspecies relations, communication and cooperation." These are multi-generational, multi-species, multi-dimensional "floating landscape[s]" that would not occur in the natural world. [435] Within the spider rooms, assistants allow spiders to weave their webs in the same space. Suspended in plexiglass frames, one spider will weave its web, the frame periodically rotated so as to reorient the forces of gravity. After a recorded period of time, the first spider will be removed, and another introduced into the same frame. Saraceno takes specific examples of spider sociability and mixes these with examples of spider independence. The results are iridescent, aesthetic forms that materialise tensions across difference, but also radical acceptance of others. His unique methods not only advance the limits of spider biology but present models from which humans might learn to improve their own methods of social organisation. As the different species "bridg[e] the architecture of each other's webs" each web-sculpture becomes its

[435] 'Webs of At-ten(sion)', *Studio Tomás Saraceno,* (n.d.), available: https://studiotomassaraceno.org/webs-of-at-tentsion/, [accessed 9 September 2019].

own discrete universe, telling a unique "story of hybrid relationships, entangling not only different arachnid webbed ecosystems but also human and more-than-human worlds."[436]

Never complete and never totally themselves, these structures remain flexible, open and adapting over time as new circumstances and new species present themselves.[437] Timothy Morton's *Ecological Thought* proposes the image of a "mesh" to assert how nothing exists by itself, making nothing fully "itself". Morton's mesh imagines a multitude of entangled "strange strangers". However, unlike a network or web, Morton's "mesh implies the hole in a network, the threading between them." Within Morton's mesh, each point is simultaneously both centre and edge, leaving no absolute centre nor edge. Instead, the mesh consists of infinite connections and infinitesimal differences and being non-static, becomes a non-totalisable, open-ended concatenation of interrelations that blur and confound boundaries at practically any level.[438] However, spiderwebs do not confound boundaries on every level. Their forms do possess an individual discreteness, positing them as unique entities. They entangle forms with infinite connections, but these connections remain tenuous and fragile. They weave new possibilities onto old ones, defamiliarising and transforming the original structures by accommodating new ones. Instead, I suggest spiderwebs to be more like Helen Hester's *xeno-hospitality*.[439]

Xenofeminism is a critical position that defends rationalist claims whilst proposing "the opening up of currently curtailed choices" to create "ideological and material infrastructures reworked to synthesise new desires as accessible, feasible choices." *Xeno-hospitality* is thus a "form of counter-social reproduction – *social reproduction against the reproduction of the social as it stands"* writes Hester. It embraces alienation and solidarity with strangers, "without falling into the trap of reproducing the same."[440] Without rejecting rationality, Xenofeminism looks to uncover alternative meanings "where existing science falls short."[441] Investing in the construction of "an alien future", this radical practice intertwines both historic and scientific claims but also looks ahead to impossible alternatives in light of "projected climate collapse."[442] I read xeno-hospitality as a process of weaving the unfamiliar, the foreign and the strange into already existing constructions of knowledge. Its aim is not deconstruction, but a process of "defamiliarisation" by "familiarising alternative networks of solidarity and intimacy in such a way that they can become generalisable

[436] 'Hybrid Webs', *Studio Tomás Saraceno,* (n.d.), available: https://studiotomassaraceno.org/hybrid-webs, [accessed 9 September 2019].
[437] Engelmann, *Cosmological,* p.170.
[438] Morton, *The Ecological Thought,* pp.15 and 28-30 and Timothy Morton, 'Guest Column: Queer Ecology' in *PMLA,* vol.125, no.2 (March 2010), pp.273-282, p.275.
[439] Helen Hester, *Xenofeminism,* (London: Polity Press, 2018), p.66. See also Laboria Cuboniks.
[440] *Ibid.*
[441] Steve Klee, 'Inhumanist Art and the Decolonisation of Nature' in *Antennae,* Issue 44, (Summer 2018), pp.4-19, p.13.
[442] Hester, p.33.

and maximally accessible."[443] Saraceno's *Webs of At-ten(sion)* similarly weave the foreign and strange into pre-existing structures to create instances of intimacy and tension, both attraction and repulsion. Each *Web of At-ten(sion)* is a unique combination of knowledges, bodies and identities, intertwining the familiar with the strange in a work of aesthetic beauty,

As an extension of the spiders' sensorial and cognitive systems, the threads of the *Webs of At-ten(sion)* allow lines of being to merge and connect. When displayed, the open frames allow viewers to reach and touch the iridescent webs, this tentative connection establishing a relationship across species lines. These webs are not only physical extensions of the spiders' perceptions but also enable humans to extend their own parameters of perception, becoming closer to spiders, and allowing us to learn from them. *Webs of At-ten(sion)* become aesthetic representations of the possibility for interspecies living. Saraceno creates a space where humans can imagine how the situated knowledges of others could be woven into their own ways of knowing. Even a partial glimpse from the perspective of another might provide opportunity for new degrees of acceptance and care to emerge.

The multi-dimensional webs are multi-temporal, weaving together points in time, fragments of history and constructing traces and memories of lived moments across bodies. The collective assembling of the webs denotes a sense of collaboration and community. However, ultimately their construction is rooted in nature. A very "interesting" web might be produced under specific conditions in the studio but ultimately the superposition of structures remains unpredictable.[444] Yet this is not about a forced sense of solidarity. Rather, within the webs we see the spiders adapting their weaving to the webbed form already present. The two webs do not become one but rather retain their individual integrity. The visual allure of the webs therefore lies in a certain expression of alienation, an accommodation in tension of *xenos*. These structures enable us to imagine possibilities for multispecies communities along "a spectrum of social harmony and dissonance."[445]

"Weaving […] is *sensible*" writes Haraway. "It performs and manifests the meaningful lived connections for sustaining kinship, behaviour and relational action."[446] Spider threads merge and accommodate others, sometimes overlapping, sometimes creating space, but always sustaining the threads of the past – we must not forget that spiders recycle their webs here. Haraway does not argue for a fluid and universalising sense of identity. She emphasises the concretisation of difference, not its dissolution. Rather we must accept and accommodate differences in their own right, allowing ourselves to become entangled with others, even if tensions remain. *Webs of At-*

[443] *Ibid*., pp.64-6.
[444] Engelmann, *Cosmological,* p.174.
[445] *Ibid*.*,* p.11.
[446] Haraway, *Trouble,* p.96.

ten(sion) aesthetically enact such a feat. Saraceno brings together spider species who in turn meet with human viewers. The spiders themselves enable artworks to be produced but also multispecies futures to be imagined.

Aligning the Micro and the Macro

The Asia Culture Centre in Gwangju, South Korea, commissioned Tomás Saraceno to create an exhibition especially for their 16-metre-high "space one". Running from July 15th, 2017 through to March 25th, 2018, *Our Interplanetary Bodies* incorporated and developed multiple threads from Saraceno's *oeuvre*. The artist combined perspectives collaborating with humans, nonhumans and the more-than-human, installing works in close proximity, each one connected to the others both physically with radial threads and through a larger algorithmic system. The exhibition modelled how the world might be if Saraceno were to design it.[447] The artist proposes floating cities, bodies moving through galaxies, multiple perspectives and nonhuman collaborators to compose one whole network of future possibility. Plunging you into the microcosmic worlds of spiders whilst simultaneously making you a macrocosmic explorer, Saraceno makes possible experiences normally confined to the imagination and resistant to thought.

The gallery contained nine, interdependent floating spheres, gently glowing with varying hues of light (figure 37). These gigantic sculptures recollected cosmic constellations, strung together in threes by seemingly fragile threads. As visitors moved around and beneath these looming forms and their shadows, an abstract moving image projected onto a wall formed a backdrop to the scene. The projection was a live broadcast of cosmic dust particles spontaneously moving across the space, captured by an intricate machine developed by Saraceno to apprehend the velocity and size of the individual particles.[448] In the context of the galactic sculptures, these microscopic particles acquired new dimensions of meaning; plummeting meteorites, shooting comets and orbiting planets burst into the imagination. This data was then converted into musical notes through an algorithm, which could be heard echoing across the gallery. These were accompanied by a lower frequency sound, emitting from the web of a spider. Saraceno amplified the vibrations of a spider plucking her web – a sound not normally audible to human ears – into acoustic rhythms which resonated with the trajectories of cosmic dust floating around the space (figure 38). As the spider moved and vibrated in

[447] Esther Schipper, *How to Entangle.*
[448] Between five and three hundred tonnes of cosmic dust falls through the atmosphere to Earth every day, and sometimes a speck might be as old as the known Universe. These particles are therefore both past and present, cosmic and earthy. *Ibid.*

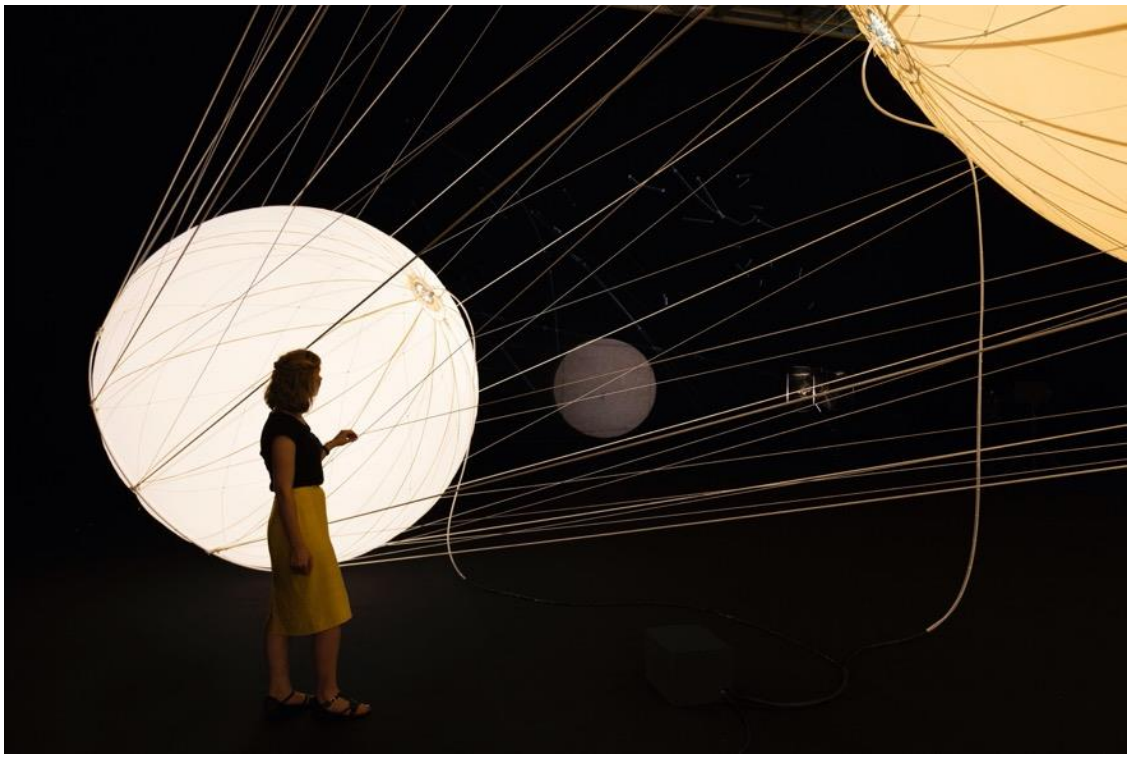

Figure 37: Tomás Saraceno, *Our Interplanetary Bodies*, (2017), Photography by Studio Tomás Saraceno, © Andrea Rossetti.

Figure 38: Tomás Saraceno, *Our Interplanetary Bodies*, (2017), Photography by Studio Tomás Saraceno, © Andrea Rossetti.

her own Umwelt, these tremors echoed around the gallery, merging with the cosmic bodies within to create a human, nonhuman and more-than-human symphony.

Saraceno started the exhibition with the weavings of a black widow spider, leaving the initial task of creation to nature (figures 39 and 40). After one week of spinning within the gallery, Saraceno invited her to move out of her web. Once she had gone, although leaving behind a living trace of her home and her movements in space, other species were invited to inhabit and weave new webs on top and around of the existing structure. Similar to the foundations laid by the black widow herself, within this exhibition as a whole, this Hybrid Web generates the composition of other artworks and bodies in the larger cosmological display. Minuscule conductor to this galactic orchestra, the spider spins and tends to her web in a performance dramatically lit up in a plexiglass box, making every movement visible as she floats between iridescent threads. As viewers become privy to a microscopic spider spinning at work, "hanging upside down – almost floating within their web – [the spider could] inspire new kinds of thinking about living on or even outside the planet, with other resources as the *Aerocene* is doing" hopes Saraceno.[449] Different times, scales, species and perspectives abound and intermingle within the web itself, which extends out into and across the large exhibition hall.

Figure 39: Tomás Saraceno, *Our Interplanetary Bodies*, (2017), Photography by Studio Tomás Saraceno, © Andrea Rossetti.

[449] Tomás Saraceno, 'Interview: Tomás Saraceno Our Interplanetary Bodies' on *YouTube,* (11th January 2018), video, 6 mins. 59 secs., available: https://www.youtube.com/watch?v=MMvGxGCkSpE, [accessed 9 September 2019].

The exhibition could be described as an extension of Saraceno's vision of the *Aerocene*, borrowing its shapes and premises (figure 41).[450] Taking inspiration from the social cartography of ballooning spiders – who patiently await a breath of air to propel them across the empty skies as their thousands of threads become entangled like a "magic carpet"[451] – Saraceno has developed a form of flying that is independent from fossil fuels and instead sensitive to the elements and the atmosphere. The membrane-structure of the *Museo Aero Solar* (launched first in 2007 and now having travelled to more than twenty cities) is composed entirely of recycled plastic bags (figure 42). Constructed over time as an open source project, it encourages us to explore new, sustainable ways of inhabiting the environment. For the solitary ballooning spiders, it is the air that makes them social and the atmosphere weaves this web. "Sensing and socialising become practically the same thing" and what would be impossible alone becomes possible together writes Engelmann.[452] In *Our Interplanetary Bodies* Saraceno subtly moves his viewers through a process of recognising this, as they interact with nonhuman beings and learn how to sense in new ways.

As the *Aerocene* project becomes sense-able to and harnesses thermodynamic energies of the Sun and Earth, floating freely by way of jet streams in the upper stratosphere, Our Interplanetary Bodies makes phenomena of the mysterious universe sense-able through an organic and poetic consilience of contemporary art with different disciplines. By placing the traditionally negligible, fearsome and misunderstood arachnid alongside structures meant to replicate our infinitely unknowable cosmos, Saraceno seems to suggest how we all form part of the same web, where each body is awarded a degree of response-ability, and no body can be overlooked. As visitors audibly collaborate with the spider, contributing to the larger interplanetary system and its rhythms, recognition of and respect for other beings and their perspectives and contributions are enhanced. Saraceno invites viewers to appreciate the sense-abilities of the spider, whose gentle vibrations are amplified to create an audible echo resonating across the gallery. His exhibitions force his viewers to adopt different methods of bodily behaviour, ducking beneath webs, straining our eyes to see in the darkness, and pricking our ears for rumbling sounds. New ways of occupying space are proposed which suggest a certain palpability of space. And in this world where space is felt, our connections to others cannot be denied.

[450] In addition to the spherical spheres interspersed within the gallery, their ballooning shapes borrowed from *Aerocene,* an *Aerocene* backpack was left in the museum's courtyard for any visitor to try if they desired, with the assistance of trained attendants.
[451] Engelmann, *Cosmological,* p.28.
[452] *Ibid.*

Figure 40: Tomás Saraceno, *Our Interplanetary Bodies*, (2017), Photography by Studio Tomás Saraceno, © Andrea Rossetti.

Figure 41: *Museo Aero Solar*, Recycled plastic bags, (2007). Photography by Studio Tomás Saraceno, © Andrea Rossetti.

Figure 42: *Museo Aero Solar*, Recycled plastic bags, (2007). Photography by Studio Tomás Saraceno, © Andrea Rossetti.

Saraceno's haptic and audible works help us to see and hear what is normally unavailable, extending human perceptions across vibrating lines of communication.[453] *Our Interplanetary Bodies* allows viewers to familiarise themselves with the spider/web in a new way. A way normally inaccessible despite them sharing our homes. She becomes an artist, a musician, a conductor, and a being in her own right, whilst contributing to the larger artistic vision of Saraceno. But also, on a greater level, to the more-than-human cosmos made metaphor in this installation. Humans and nonhumans both play the role of active agent in this space, joined together in cosmic harmony.

As visitors emerge from the cosmic web within the Asia Culture Centre, they were able to experiment with an *Aerocene* sculpture themselves (figure 43). A ballooning backpack was left in the museum courtyard for any visitor to try if they desired, with the assistance of trained attendants. What Saraceno's exhibition achieves is a poetic consilience of different artworks, species, times, places and elements. The spider as conductor creates the interconnecting platform where the cosmic relations between a cluster of webs and a cluster of galaxies can really be felt, and from which new ideas can unfold. After briefly floating into the air, having encountered radically different ways of sensing in the world of spider/webs, the exhibition concludes by returning visitors to Earth. Now it is up to us to experiment with manifestations of future change to our ways of life; having felt what it is like to be a spider with/in her web, having felt what it is like to collaborate with another species in a more-than-human world.

Figure 43: Tomás Saraceno, *Our Interplanetary Bodies*, (2017), Photography by Studio Tomás Saraceno, © Andrea Rossetti

[453] Eleanor Morgan, *Gossamer Days,* p.113.

Resonating with Otherness

> A prevailing characteristic among spiders is the ability to 'hear', not through a timbal-like organ as in humans, but rather through trichobothria, thin hairs emerging from their legs. These individual hairs once exposed to air currents act as movement detectors and respond to air-borne stimuli. So-called slit-sensilla, tiny slits in the exoskeleton inform the spider about vibrations through the substrate.[454]

Spiders communicate sensually not verbally. They go beyond our human capacities and present us with an alternative way of knowing the world – through vibrations. Eva Hayward describes how "sense organs […] are portals or channels open to the external and intra-(in)organic worlds, through which enormous streams of impulses are constantly flowing into the body."[455] She uses this analysis to emphasise that beings are shaped by their sensations, going on to describe how the "lived body is always also mediated by [its] engagement with other bodies and things. Thus [one's] experiences are always mediated by historical and cultural systems that constrain [one's] perception and [one's] world."[456] Finding meaning in matter, Hayward demonstrates how sensuality can make possible structures and meanings that instruct experience and allow us to accommodate others in new types of relationships.

Tomás Saraceno achieves such a feat working with spider/webs. In becoming attuned to their resonances, the artist creates spaces where humans too can experience such degrees of sensuality. His viewers are invited to feel more sensibly as spiders do and to hear phenomena normally outside of earshot. Placed in macro-cosmological displays, the human viewer can experience life like the microscopic spider. I have explored why the capacity to *feel* others – their movements and their positioning – and to *resonate with* them is so important in our current moment of ecological crisis. Spider/webs for Saraceno spark inquiry into possible methods to redefine relationships both within humanity itself and between humans and the more-than-human world. Partial vision and situated knowledges are key, alongside openness, attunement and willingness to defamiliarise one's position. Then we can accommodate, mediate and join with – even if only fleetingly – the needs and perspectives of others. Imbricating art and science, Saraceno's spider/webs become the most sensual way to imagine future modes of life where all situated

[454] Peter Jäger quoted in Engelmann, p.73.
[455] Hayward, *Envisioning,* p.15
[456] *Ibid.,* p.31.

knowledges have a place, where all strangers and outlying others are allowed, and felt, to resonate with their own perspective and voice.

As humanity and our capabilities expand and develop, what one witnesses is a keen interest in learning ever more about more-than-human technologies and spaces. Scientists are now virtually weaving together telescopes around the world in order to look deep into the eye of a black hole or to encounter other forms of intelligent life out there for example.[457] Saraceno instead reminds us that there are things much closer that merit a closer look. He provokes his viewers to relish and enhance their connections to life here on terrestrial Earth and suggests that only once we come to terms with the other species with whom we share the planet, might we have the capacity to inhabit the universe at large. Through his close attention to arachnid ecologies, Saraceno imagines possible interspecies webs of relations that in fact lie right under our noses. His artworks show what we might learn and how we might develop if we situate our perspectives *with* those normally considered strangers, *Xenos* such as the spider weaving her web in the corner of our window frame.

[457] See chapter five for further discussion of the human preoccupation with extra-terrestrial intelligence.

Interlude: An Encounter with Radical Otherness

I enter the rink by a side door and am immediately stopped by an attendant.[458] He instructs me not to stray from the designated paths and "not to make contact with the bees." He points out the two hives, sprouting up from the clay floor to almost two metres in height, seeming more like ominous termite mounds to me. I follow what would have been the edge of the ice-rink around the excavated floor, and then out across a strategically positioned viewing platform at one end of the spectacle. I am now able to survey the scene in full. I can't help but picture the rows of spectators who would have filled the benches lining the sides of the ice-rink just last year, light streaming in from above to illuminate the action below. But now the concrete floor has been sliced open and the underlying foundations dug up to create clay paths along which viewers can navigate the ecosystem constructed by artist Pierre Huyghe. Interspersed along these routes are stagnant pools of water, which glisten with a kind of radioactive sheen. The green algae blooming on the surface provide the brightest colours (figure 44).

Figure 44: Exhibition view of Pierre Huyghe, *After Alife Ahead,* (2017), photo by the author.

[458] This interlude was published: Elizabeth Atkinson, 'After Alife Ahead' in *Something Other: In Response*, (December 5, 2017), available: https://somethingother.blog/2017/12/05/after-alife-ahead/, [accessed 8 October 2019].

Figure 45: Exhibition view of Pierre Huyghe, *After Alife Ahead,* (2017), photo by the author.

As I look out over *After Alife Ahead*, my attention is once more drawn towards the two hives at either end of the ice rink (figure 45). They buzz with activity as the insects come and go. It is only on closer inspection of my photographs after the event, that I realise these are not the beloved honeybee. They appear more wasp-like, less fluffy and bright, and a bit more sinister. These lesser famous bees, a species I do not know, a species I hadn't considered existed in my anthropocentric thinking that honeybees are the only type, apparently do not manufacture honey. Honeybees are but one species of more than 200, all with their own role to play in our ecological community. I wonder as I watch the teeming life of the hive what the purpose of their colony might be in this barren landscape. I am fascinated by what *National Geographic* journalist Peter Millar calls their "swarm intelligence" and "decentralised coordination". The bees' methods of social organisation provide ecological models from which humans might learn. Millar writes how the study of "swarm

intelligence" indicates "almost any group that follows the bees' rules will make itself smarter."[459] Critical theorist Jason Wallin uses "swarm ontology" to explain how all life is constituted by "microbial and amoebic intelligences that are not *our own.*" In his chapter 'Dark Pedagogy', included in Patricia MacCormack's *The Animal Catalyst*, Wallin suggests that if humans were to adopt such a collective method of thinking, this would create "a queer symbiosis of human/inhuman assemblages suggesting a turning from the transcendent towards the material connection of life forces and their potential to constitute an ecosophical ethics that begins by displacing the anthropocentric conceit of a 'unified' and 'uncontaminated' *world-for-us*."[460]

We are currently witnessing an alarming rate of unexplained colony collapse across bee populations. Yet this has not served as drastic enough warning that the chemicals we pump into and subsequent strain we enforce onto our world are destroying life forms upon whom we are dependent for our own survival. An absence of the crucial cross-pollination bees and many other insects perform would result in drastic food shortages worldwide. In addition to us being dependent upon bees and their propagating functions, the amorphous materiality of the swarming hive, a one that is a many of ones, presents an alternative social model to the one I know: Western capitalism, a pseudo-democratic system overshadowed by the inhuman effects of neoliberal forces.

Within the hive, with the exception of the queen, all the bees work together to harvest pollen and produce wax for their own greater good. Bees with their swarm mentality, decentralised coordination and matriarchy present a structural alternative to our own patriarchal institution. They morph into Timothy Morton's *dark ecology*. This takes the formation of a "mesh" made up of "strange strangers", a structure where lives can be *spectral,* both themselves and not at the same time. For Morton, all species are dependent and depended upon by others both within their own bodies and the larger environment. A sprawling network without centre or edge, Morton presents ecological awareness as uncanny and indigestible.[461] For Wallin, the bees are an example of a possible ecological pedagogy that embraces all manner of ecologies, remaining faithfully attendant to the larger whole.[462] A heterogeneous mass of beings, all related yet independent in their own rights, the bees within *After Alife Ahead* hint at the human need to recognise itself as part of a much larger system. Technological prostheses, animal others and inanimate plant life must be acknowledged: we are all part of an interdependent network.

The very otherness of the bees, their total difference from myself in their movements and appearance, allures my gaze, whilst simultaneously alienating me in fear of their sting. But I feel an

[459] Peter Millar, 'Swarm Theory' in *National Geographic,* (July 2007).
[460] Jason Wallin, 'Dark Pedagogy' in *The Animal Catalyst,* ed. by Patricia McCormack, (London: Bloomsbury Academic, 2014), pp.145-162, p.155.
[461] Timothy Morton, *Dark Ecology*.
[462] See Wallin, p.145-162.

underlying sadism. I know they will suffer more than me, facing death in their single opportunity to penetrate another. Like the gluttonous children's character Winnie the Pooh, in endless search of his honey fix, we suffer their sting to satisfy our interminable sweet tooth. We go so far as to try to translate the hums, buzzings and wagglings of their unique and sophisticated modes of communication in our interminable hunger for knowledge. Causing irreversible destruction to the functioning of the bees *en-route*, humans forever remain in the dark. We are controlled by, not in control of, bee capacities to (re)produce.

Perceived through the lens of their difference from us, insects question the rigid categories we impose to mark ourselves out as specifically human, as well as how we differentiate between human identities. Bees in particular, with their matriarchal totalitarian societies, both fascinate and terrify human curiosity. Perhaps we can learn something from how they organise their hives? Laline Paull's novel *The Bees* dramatises what life might be like inside the world of the hive. Her vision paints an eerie picture of competition and hierarchy. Even under a tyrannical queen, the importance of, and reliance upon male bees remains significant, and the queen's violent rule incites fear in Paull's readers. Although the story of the rebellious worker bee Flora 717 ends triumphantly, her illegal offspring taking control of the hive, this story does not explore an alternative society for people to emulate. Instead, Paull presents a chillingly human encounter with the unknown. Her book illustrates how it is impossible for us to imagine what life is like for these creatures, being completely limited to our own perceptions, experiences and understanding of relationships and the world around us.[463] We cannot help but project our human ideologies and constructions onto the animal kingdom. Other species remain unknowable beneath our narcissistic labels.

The Ancient Greeks referred to bees as the Birds of the Muses, and it was believed that if they touched an infant's lips, he would be granted the gift of song, exceptional eloquence, or even prophecy. This was said to have happened to Plato, Sophocles, Virgil and others, thus bestowing on them their philosophical wisdom. In the Egyptian hieroglyphic language, the bee was the symbol of royal nomenclature, a reflection of hierarchical organisation as well as of industry, creative activity and wealth.[464] These ancient perspectives suggest that humans may not lie at the centre of the universe. Perhaps we are in fact in debt to bees for our cognitive abilities – the very abilities we implement to distinguish ourselves from all other species?

[463] Laline Paull, *The Bees,* (London: Fourth Estate, 2015).
[464] Emma Lavigne, 'The Garden of Forking Paths, in *Pierre Huyghe,* pp.214-217, p.216.

Figure 46: Exhibition view of Pierre Huyghe, *After Alife Ahead,* (2017), photo by the author.

I am filled with further intrigue as the bees vanish through the cracks of their large clay structures, burrowing secretly into a *holey space* that I cannot access (figure 46).[465] I must not get too close for fear of their sting, recollecting the words of warning when I entered the ice-rink. The bees and their habitat remain impenetrable. The organisation and powers of production of these creatures remain a mystery over which I can only look on as observer and outsider, never to become privy. Wallin describes how "the *burrow* punctuates the territory, forcing it into secret nuptials with unregistered forces" suggesting "that astride the *official enunciations* of the institution might subtend all manner of *unthought* connections of the institutions through which different ecologies or cartographic diagrams of the world might be forged."[466] The mystery of the bees, whom I follow with my eyes until they disappear into their own world, escapes my gaze. I know I am connected to them but will never be able to fully understand them. Wallin urges his readers to notice what is absorbed into traditional anthropocentric thinking and to open up "*from within* and *beneath*" in order to search out "new ethical relations to *life* that do not reflect the image of the human, but its hallucinatory undoing for the purpose of defraying the speciesist, colonial and narcissistic practices that are the legacy of anthropocentrism."[467] The matriarchal republic of the bees suggests one way of doing this. I cannot locate any trace of human thinking here, and I struggle to find meaning as I watch the swarming of these laborious insects. I am placed in relation to these bees in an art context

[465] Wallin, p.155.
[466] *Ibid*., p.156.
[467] *Ibid.*, p.157.

which escapes typical understandings of animals as available for human appropriation.[468] These bees are not here to manufacture honey nor pollinate crops. Rather they inhabit their own space and I am invited into an encounter. I am able to observe them in their differences and consider what these tiny animals might offer up to us socially.

Instead of ignoring or destroying anything we cannot understand, might we not take heed from other non-hierarchical species burrowing in the cracks? Wallin hints at the destructive capacities of human differentiation and dualism, originating in the specious separation of species on the grounds of capacities for rationality and language. We need to come down from our pedestals to seek new knowledges and ethics that can accommodate all life, the creepiest and the crawliest. What Huyghe's ecosystem brings attention to is how we are implicated in the material ecologies of this planet, not superior to nor outside of them. Even if we are unable to penetrate the mysterious depths of other species and their processes, the very layout of *After Alife Ahead* forces us to walk down from the viewing platform to encounter the subterranean worlds below and consider our relationship to otherness in this microcosmic space. Despite my physical isolation from the swarming, burrowing world of these bees, when placed in proximity to their activity in this barren landscape I begin to consider our very real dependence on them. I am transported to a dystopian time ahead when there might be no fauna left for them to pollinate, a dark picture with repercussions for both me and them. I am immediately implicated in the damage taking place. Within Huyghe's ecosystem, the risk of disappearing life somehow feels more acute, and these two, solitary hives, bleak in the absence of honey and fauna, suggest troubled times to come.

[468] Although this remains complicated by the fact that Huyghe is obviously making use of the bees for his own art practice, profiting from their presence within *After Alife Ahead.*

Chapter 4. Spaces of Unthought in Pierre Huyghe's Systems

Engineer of Evolution

> An exhibition is not meant to exhibit something to someone but to exhibit someone to something.[469]

Pierre Huyghe creates work that he defines as an experience, evolving unpredictably out of contingency and chance encounters.[470] Not dependent on a human viewing subject, his work challenges both what art can be, and the human position in the world. The artist's goal is the generation of something – situations, meanings or perspectives – not constrained by traditional confines such as the viewer's gaze, the gallery walls, or cultured forms of knowledge. In this chapter, I explore how the artist creates spaces where human knowledge constructions are subverted, and expose the radical possibilities allowed to take root. Employing animal, plant and technological players, these are spaces where hierarchies are toppled, and anthropocentrism is overthrown. Human meaning can no longer make sense. Atypical alliances erupt into a foreground where all entities are placed in coexistence.

I analyse moments in Huyghe's practice alongside contemporary thinking by Donna Haraway on multispecies living, N. Katherine Hayles on (nonconscious) cognition and Jacques Derrida on translation. In so doing I expose why Huyghe's complex systems, wrought with interspecies processes and communications, are spaces of both allure and alienation for his human viewers. Surreal and irrational components are balanced against rational and concrete mechanisms which not only reflect our contemporary condition but also destabilise beliefs in the origins of human supremacy. Human viewers are reminded of both their interconnections with nonhuman life as well as their inability to ever fully penetrate the worlds of the beings they encounter. Huyghe's work presents us with evolving subjectivities and meanings engineered to prevent humans from ever gaining a firm grip on otherness. What matters in his work are physical processes and their players. The importance of the human mind is side-lined, dropped into the compost heap to be broken down underfoot and reformed in connection with alternative realities normally out of view.

Within his systems, Huyghe's viewers' minds drift into other realms. I explore four of Huyghe's works to emphasise their antagonistic provocation. First, his 2014 ecosystem *Untilled,*

[469] Pierre Huyghe quoted in Nicolas Bourriaud, 'Keynote Address' in *Nasher Prize Graduate Symposium Compendium,* (2017), pp.87-105, p.97, available online: http://www.nashersculpturecenter.org/Portals/0/Documents/Learn/Nasher-Prize-Graduate-Symposium-Compendium-2017.pdf, [accessed 5 July 2019].
[470] Bourriaud, p.97.

exhibited at dOCUMENTA (13) in Kassel, secondly the "biotope" *After Alife Ahead* installed at Münster Sculpture Project in 2017[471] and thirdly the vibrating *UUmwelt* occupying the Serpentine in London at the beginning of 2019. The 'Coda' that follows this chapter is a personal encounter with *Untitled (Human Mask),* a video work apparently set in the Fukushima exclusion zone, included in the 2014 exhibition *In.Border.Deep* at London's Hauser & Wirth. Each work incorporates nonhuman life in eerie and uncanny ways. Huyghe appropriates abandoned spaces within which he can "conceive the conditions" for his work, setting the stage so to speak.[472] He then relinquishes artistic control to the autonomous components he places in co-presence. Bodies become porous, interconnected in networks to emphasise the shared precarity and vulnerability of lifeforms. Outside of human constructions, these are spaces which look back to a primordial stage of life before language took its hold, and forward to an increasingly neoliberal technological future. The human struggle to position oneself in these spaces is an integral component of Huyghe's works, and why his practice is of such value to my thinking. I untangle the knots in this thread throughout this chapter to challenge anthropocentrism with alternative ways of being.

Exposing Negativity

Pierre Huyghe began producing work to reflect his long-standing interest in temporality in the 1990s. He exhibited with artists including Liam Gillick, Philippe Parreno and Dominique Gonzalez-Foerster, who all work to challenge the traditional protocols of the form of the artwork and exhibition.[473] Huyghe's practice, although difficult to define in itself, can be situated within a revolutionary art historical context which has continually sought to redefine and challenge what is meant by the artwork and the exhibition. His inclusion of human/animal hybrids, his blurring of the

[471] Pierre Huyghe, 'After Alife Ahead' in the *Skulptur Projekte Münster,* ed. by Kasper König, Britta Peters, Marianne Wagner and Hermann Arnhold, (Leipzig: Spector Books, 2017), Exhibition Catalogue, p.210.

[472] Pierre Huyghe quoted in Ben Eastham, 'Pierre Huyghe' in *ArtReview,* (October 2018), available: https://artreview.com/features/ar_october_2018_feature_pierre_huyghe/, [accessed 30 October 2019], (my italics).

[473] In 1995 he created the project *L'Association des Temps Libérés (The Association of Freed Time)* in response to the request to participate in the *Moral Maze* exhibition co-curated by Liam Gillick and Philippe Parreno. A legally recognised organisation, its mandate, published on July 5th in France's *Journal Officiel*, was outlined as "to develop unproductive time, to reflect on free time and the development of a society without work." The Association's first meetings and members included the artists exhibiting at *Moral Maze* who would become familiar collaborators in future years, including Angela Bulloch, Maurizio Cattelan, Liam Gillick, Dominique Gonzalez-Foerster, Douglas Gordon, Carsten Höller, Jorge Pardo, Philippe Parreno and Rirkrit Tiravanija. They claimed for time "freed" from the work economy, distinct from controlled leisure time, to allow for imaginative play and social experiments. Lauren Rotenberg points out that the association's goals "can be linked to previous avant-gardes that attempted to mobilise non-work and a radical rethinking of the concept of laziness." 'The Prospects of "Freed" Time: Pierre Huyghe and *L'association des Temps Libérés*' in *Public Art Dialogue,* vol.3, no.2 (2013) pp.186-216, p.186.

real, symbolic and imaginary, and the relinquishing of his artistic human control to nonconscious processes (be that compostation, cell mutation or artificial intelligence) in his work recalls Surrealism and their practice of automatic writing and the painting of fantastical landscapes. His use of found objects (concrete slabs, disused ice rinks and gallery walls) can be traced back to Duchamp and other avant-gardists who found in the indeterminacy of the readymade a "rational expression of avoiding the control of your mind."[474] Both of these traditions aimed to escape the confines of consciousness and instead access a more liberating realm of the mind where true expression might be achieved. Huyghe's practice goes beyond these methods, breaking out of consciousness into even deeper realms of unthought. He displaces notions of time as static or place as fixed, creating new situations which do not conform to the laws that humans construct to frame their world.

Huyghe's incorporation of animal, plant, elemental and technological life links him to the artistic tradition emerging in the 1960s that critiqued the concept of 'the centre' – be that the subject-object relation in the art world, or human consciousness and animal behaviour in the living world.[475] In his keynote address for the Nasher Prize Graduate Symposium in 2017, aesthetic theorist Nicolas Bourriaud stated that Huyghe achieves this "*de*centring" through the "equalisation of [human and nonhuman] elements 'normally' supposed to be hierarchised." His work being *without* centre or periphery, typical human orientations of the world lose their ground, and the limits of the work itself can no longer be pinpointed.[476] Huyghe folds together typical juxtapositions including reality and artifice, fact and fiction, past, present and future, nature and culture, human, animal and technological, documentary and invention, memory and imagination and subject and object. His work emphasises the permeability and tension between these matters in relation to one another, rather than their typical binaric opposition.

The artist describes his works to be "zones of *non*-knowledge." These are spaces where things have no names, they "*cannot* be exhausted by discourse" and so "open up the realm of possibility, even if chaotically."[477] Rational human structures cannot extract or dissect meaning here, compromising human superiority and unicity. We are opened up to the world around us. Hybrid forms and natural processes remain indiscernible and unnameable, suggesting the presence of alternative meanings in the world outside of the human experience rooted in language. Through Huyghe's interest in "*un*-telling" he seeks to break down traditional conceptions of (human)

[474] Dorothea von Hantelmann, 'Situated Cosmo-Technologies: Pierre Huyghe's Untilled and After ALife Ahead', printed in *Serpentine Galleries Press Release: Pierre Huyghe UUmwelt,* (2018), available: https://www.serpentinegalleries.org/files/press-releases/full_press_pack_-_pierre_huyghe_final_0.pdf, [accessed 31 October 2019].
[475] Bourriaud, p.100.
[476] *Ibid.,* (my italics).
[477] Pierre Huyghe in Marie-France Rafael, *On Site,* (Köln: Verlag der Buchhandlung Walther König, 2013), p.45, (my italics).

knowledge and instead propose "rough" improvisational knowledges and the potential for new languages and experiences to emerge.[478] There thus exists a simultaneous "movement of disintegration and categorisation in his work" creating art that "*happens.*"[479] Cartesian beliefs in the human power to dominate is challenged. What we know falls apart and new possibilities erupt into the frame.

> In the first place, it's a matter of taking circumstances into account and speaking through their chaotic existence. I put them in co-presence, but separated, in order to see how they act or refuse to do so. It has to do with protocols of separation.[480]

Multiple perspectives abound in coexistence and the viewer enters as beholder to the entangled assemblage of interspecies relationality.[481] Through the production of "new conditions" that can "*decentre* and weaken power structures" – such as the belief that there is a coherent and autonomous human self, grounded in the capacity for rationality – Huyghe challenges Descartes' conviction "I think therefore I am" and the resultant mind over matter hierarchy.[482] Huyghe speculates beyond the thinking human subject and instead lays the focus of his work on the sets of relations present, and in emergence, between physical – yet not always observable – entities within his systems, including the entering and departing human viewer.[483]

In this way Huyghe's work "repositions spectatorship", forcing the viewer to look outside of his or her own *Umwelt* where art is loaded with historical meaning available only to those humans "in the know."[484] Huyghe acknowledges difference and seems to warn his human viewers against the belief that they can exercise control over others through systematisation and taxonomy, or *the capacity to name*.[485] At once the viewer is reminded of their separation from nonhuman worlds and yet, of their entanglement with them within this larger, living, system. Huyghe's is a thinking practice that invites us to think the other in ways that are other.[486] The experience of being inside one of his microcosms encourages a radical transformation of one's perspective and relationship to otherness, something that I argue is increasingly vital in our current social context.

[478] *Ibid.* Nesbitt, p.180, (my italics).
[479] Bourriaud, p.90.
[480] Huyghe in Rafael, p.45.
[481] Bourriaud, p.102.
[482] Huyghe quoted in Eastham.
[483] Hantelmann, p.10.
[484] Boetzkes, p.75.
[485] Eastham.
[486] Filipa Ramos, 'Introduction: Art Across Species and Beings' in *Animals: Documents of Contemporary Art,* ed. by Filipa Ramos, (London: Whitechapel Gallery, 2016), pp.12-21, p.14.

Multispecies Living

In *When Species Meet*, Donna Haraway explores the idea of companion species. She employs her pet dog Cayenne as a figure to help her "grapple inside the flesh of world-making entanglements that [she calls] *contact zones.*"[487] For Haraway, contact zones are spaces where beings emerge in relation *to* one another, as subjects and objects *with* one another, precisely through the verbs of their relating. Contact approaches presuppose not sociocultural wholes subsequently brought into relationship but rather systems always already constituted relationally, entering new relations through historical processes of displacement.[488] These encounters between humans and animals – which provoke a curious response to the other – lead to knowledges that cannot be unlearnt and generate the growth of "response-ability."[489] Haraway details how organisms as companion species "mutually co-shape one another, in all sorts of temporalities and corporealities", becoming her own "awkward term for a not-humanism in which species of all sorts are in question."[490] The point is that contact zones are where the action and current entanglements change interactions to follow. These relationships in companion create entities different from what they would have been if they had not co-habited, co-evolved and co-existed. Haraway suggests how bodies are always in-the-making *together*; they are always a vital entanglement of heterogeneous scales, times and kinds of being webbed into fleshly presence of multispecies living. Always *becoming-with,* bodies are constituted in their relating within contact zones changing 'the subject' in surprising ways.

Haraway's more recent *Staying with the Trouble* challenges the arrogantly anthropocentric "Anthropocene" with her own term "Chthulucene." This model of "string figures" is an entanglement of "myriad temporalities and spatialities and myriad intra-active entities-in-assemblages – including the more-than-human, other-than-human, inhuman, and human-as-humus."[491] To be a human in the present-day is about relating-to and becoming-with differences across variating timescales and unknown territories. Haraway's goal for existence is the flourishing

[487] Haraway, *Species,* p.4. The term "contact zone" was initially coined by Mary Pratt "which she adapted 'from its use in linguistics, where the term "contact language" refers to improvised languages that develop among speakers of different native languages who need to communicate with each other consistently.'" Pratt aimed to "'foreground the interactive, improvisational dimensions of colonial encounters so easily ignored or suppressed by diffusionist accounts of conquest and domination. A contact perspective emphasises how subjects are constituted in and by their relations to each other … It treats the relations … in terms of co-presence, interaction, interlocking understandings and practices, often within radically asymmetrical relations of power.'" Mary Pratt quoted in Haraway, *Species,* p.216.
[488] Haraway, *Species.,* p.217.
[489] *Ibid.,* p.287. See my 'Introduction' for an elaboration of Haraway's term "response-ability".
[490] *Ibid.,* p.164.
[491] Haraway, *Trouble,* p.101.

of *all* life forms however insignificant or indiscernible to one's own perceptual lifeworld. Subjectivity is no longer whole, discrete nor autonomous, but partial and in friction with radical otherness. Knowledge can no longer be confined to the human mind but is enacted, emerging across time, space and matter out of subjects who are always already in relation with each other and their environment.

I see Huyghe's practice as a reflection of Haraway's multispecies thinking. Working across species lines, Huyghe creates living environments, assemblages constructed from a network of interdependent relationships. Concepts are exposed to the regenerative work of compostation to enable the growth and evolution of ways of living and thinking that had previously been unthought. In this way, Huyghe's work recreates Haraway's "contact zones" where new understandings emerge out of co-becoming across differences. Species hierarchies dissolve whilst unexpected and empathic affinities and a reconstruction of identities within lived experience are provoked.[492] My analyses of Huyghe's practice in this chapter are done through Haraway's lens, reading his works as models for multispecies living.

Not Navigating 'the Self'

> I was trying to expose these people to something, existing with or without them, indifferent to their presence.[493]

Pierre Huyghe's installation *Untilled* for dOCUMENTA (13) could be found in the composting area of the baroque-style Karlsaue Park in Kassel, Germany.[494] The piece took its location within this

[492] Despret, 'Responding Bodies', p.59. Empathy for Despret is not only being the ability to feel what others feel but "making the body available for the response of another being" enabling us to begin to think with our bodies and thus with the bodies of others, pp.70-1.

[493] Pierre Huyghe quoted in Storr, p.44.

Part of this section of the chapter was published: Elizabeth Atkinson, 'Pierre Huyghe: Generating Antagonism Through Appropriation of Public Space' in *Curatingthecontemporary.org,* (March 17, 2016), available: https://curatingthecontemporary.org/2016/03/17/pierre-huyghe-generating-antagonism-through-appropriation-of-public-space/, [accessed 30 October 2019].

[494] Huyghe, in *Documenta-Guidebook,* p.262. This text was written by Huyghe to accompany the exhibition at dOCUMENTA (13). In addition, printed in the biennial catalogue was a rough sketch or diagram showing the various interconnecting elements of the work. These limited accompaniments become useful in understanding the conceptual layers of the work, which on site, remain totally unexplained and thus incomprehensible. As Hantelmann points out in her essay 'Situated Cosmo-Technologies' these documents "thematise various and distinct kinds of transformation processes: things and bodies, fragmented and decomposed, in a process of construction and deconstruction." They make clear the instability and contingency inherent to Huyghe's practice and the constant interplay of apparently oppositional forces, p.4.

The word "untilled" describes a piece of land not prepared and cultivated for crops. (OED) Huyghe's choice of title emphasizes this to be a space not typically visited by the public, either in general or at the biennial itself.

cyclical space as both its literal and figurative model. Composting as a theoretical approach has gained prominence in recent years by feminist thinkers including Haraway, Jennifer Mae Hamilton and Astrid Neimanis, amongst others. It becomes a useful method for re-envisioning relationality and multispecies modes of becoming-with across time and space. Combining *com* "with" and *post* "after" this regenerative and re-cyclical term emphasises the importance of relationality for things to come. Composting creates a form of "politics of the earth with a vision of the more-than-human-world." Editors Lynn Turner, Ron Broglio and Undine Sellbach of *The Edinburgh Companion to Animal Studies* describe how compost thus "exacerbates the unknown quality of our becoming-with others in a state of change in a hopeful way."[495] Neimanis and Hamilton, employ "composting as a practice [to] demand […] that we pay attention to what goes in the compost bin. It implores that we attend to our critical metabolisms – to notice not only what is being transmogrified but also under what conditions and to what effect."[496]

Inspired by Haraway's *Situated Knowledges* with its explicit political goal of solidarity in politics,[497] this is an inclusive way of thinking that "does not mean destroying all borders or limits between traditions and disciplines and methodologies" but instead "invites careful attention to how myriad environmental and social justices, violences and power asymmetries intersect – and don't – while carefully working to see which stories and concepts can grow others into being."[498] Composting as a methodology requires attention to the intersecting threads of the world, respecting their differences whilst acknowledging surprising connections and eruptions.

The compost area being "a place where people throw down dead or useless things" is somewhere normally kept out of sight and out of mind. Pierre Huyghe appropriates this marginalised space for *Untilled* and adds in fragments from the past and remnants of human culture to create a "sedimentation of histories."[499] Art historical markers such as a bench by Dominique Gonzalez-Foerster and an oak by Joseph Beuys were deposited in this space without context nor explanation. No thing in *Untilled* takes precedence over another, and no thing is given a human meaning. Instead, natural forms and artworks co-exist as beings in themselves, and pasts, presents and futures intersect.

[495] Lynn Turner, Ron Broglio and Undine Sellbach, 'Introduction' in Turner *et. al.*, pp.1-12, p.9.
[496] Jennifer Mae Hamilton and Astrid Neimanis, 'Composting Feminisms and Environmental Humanities' in *Environmental Humanities,* 10:2, (Nov. 2018), pp.501-527, pp.503 and 504.
[497] For further discussion of Haraway's chapter 'Situated Knowledges' see chapter three. Haraway writes that "Staying with the trouble requires making oddkin, that is, we require each other in unexpected collaborations and combinations, in hot compost piles." Haraway, *Trouble,* p.4.
[498] Neimanis and Hamilton, p.516.
[499] Huyghe in Storr, p.43.

> The place is enclosed. Elements and spaces from different times in history lie next to each other with no chronological order or sign of origin […] In the compost of the Karlsaue Park, artefacts, inanimate elements, and living organisms […] plants, animals, humans, bacteria, are left without culture[500] (figure 47).

Figure 47: Pierre Huyghe, *Untilled,* (2011-2). Alive entities and inanimate things, made and not made. Exhibition view: *Untilled,* dOCUMENTA 13, Kassel, 2012. Commissioned and produced by dOCUMENTA (13) with the support of Colección CIAC AC, Mexico; Foundation Louis Vuitton pour la création, Paris; Ishikawa Collection, Okayama, Japan. Courtesy the artist; Marian Goodman Gallery, New York; Esther Schipper, Berlin. © VG Bild-Kunst, Bonn, 2019. Photo © Pierre Huyghe.

Viewers enter this marginal space as if by chance. Nothing is addressed to the human as viewing subject, and what happens there is indifferent to their presence. They are left without a central or determined position within this space of flow and flux. Offering up nature as his artistic material, Huyghe creates a work whose components do not care (or know) that they are being exhibited. Rather they focus their attention on their own lived experience. In this space, viewers experience a digestion of their expectations and beliefs and a regeneration of new modes of thinking and being. Huyghe offers up artistic "zones of differentiation", writes director of the Ludwig

[500] Huyghe in *Documenta-Guidebook,* p.262.

Museum in Budapest Katia Baudin, making visible possibilities for change and displacement in the organisation and presentation of his artworks. *Untilled* meaning an uncultivated or fallowing plot of land, Huyghe's title plays on the typical *Untitled* often used by artists across cultural history. Having found the composting area himself, Huyghe left this found space uncultivated and only partially bounded by a shadowy barrier of trees. He then introduced a variety of new elements and entities to interact and cohabit with and within the space. Never sure what was there to begin with, viewers struggle to pinpoint exactly where the artwork ends, and the real world begins. This was not an artwork as had ever been exhibited before, but an ecosystem, within which smaller ecosystems and *Umwelts* functioned in coexistence.

The artist challenges our understanding of not only what constitutes art in public space and our means of collaboration but also subverts our perception of relationships between life forms on Earth.

> I'm interested in the vitality of the image, in the way an idea, or artefact, leaks into a biological or mineral reality. It is a set of topological questions. It is not displayed for a public, but for a raw witness exposed to these operations.[501]

Part-installation, part-sculpture, part-performance, *Untilled* was a collaboration between non-traditional actors. The living beings of Huyghe's work become "co-authors […] Nature functions less as a counterpart and instead becomes an essential part."[502] Huyghe relinquished his artistic control to them, allowing the evolution of the artwork on its own terms. In this refusal to be fixed, *Untilled* became a temporal exhibition, one with a life of its own which could not be predetermined nor predicted. Huyghe positions his viewers in worlds which remain almost entirely unknowable to them. The human is no longer at the centre, and relationships are suggested at only through their gathering.[503]

[501] Pierre Huyghe quoted in Ursula Ströbele, 'Concepts of Nature in Sculpture Today' in *Nasher Compendium,* pp.41-58, p.53.
[502] Ströbele, p.46.
[503] Bourriaud, p.105.

> The set of operations that occurs between them has no script. There are antagonisms, associations, hospitality and hostility, corruption, separation and de-generation or collapse with no encounters […] invisible and continuous transformations, movements and processes but no choreography.[504]

Figure 48: Pierre Huyghe, *Untilled,* (2011-2). Alive entities and inanimate things, made and not made. Exhibition view: *Untilled,* dOCUMENTA 13, Kassel, 2012. Commissioned and produced by dOCUMENTA (13) with the support of Colección CIAC AC, Mexico; Foundation Louis Vuitton pour la création, Paris; Ishikawa Collection, Okayama, Japan. Courtesy the artist; Marian Goodman Gallery, New York; Esther Schipper, Berlin. © VG Bild-Kunst, Bonn, 2019. Photo © Pierre Huyghe.

Traditionally a communal leisure space for humans, Karlsaue Park is taken over by the artist and nature, creating a place of separation, free from traditional attractions.[505] This is no longer a place for us. By replacing logical identity with organic identity, *Untilled* seeks to understand species' aptitudes and constructs a set of possible behavioural relationships without trying to make

[504] Huyghe in *Documenta-Guidebook.*

[505] For Robert Smithson, the park can no longer be seen as a "thing-in-itself" but as a process of ongoing relationships existing in a physical region – the park becoming a "thing-for-us." Robert Smithson, 'Frederick Law Olmsted and the Dialectical Landscape,' in *Artforum*, (Feb. 1973), pp.62-68, p.65.

nonhuman forms of life play or perform.[506] Different entities are positioned in proximity to one another, the artist catalysing the emergence of certain processes and relationships. Human viewers can only look on in "curious antinomy" as beliefs are shattered and expectations exploded.[507] The planting of hallucinogenic plants for example, whose ingestion alters consciousness, indicates at the possible break down of ordinary notions of the self and the world, even if only temporarily (figure 50). Huyghe draws attention to the unstable, corrodible nature of consciousness, which humans cling onto as a marker of their elevation above the natural world. He seems to suggest that if we step out of our human *Umwelt* circumscribed by consciousness and rationality, new meanings, understandings and interpretations might flourish, which could then be extended into the political realm.

> The colony pollinates aphrodisiac and psychotropic plants […] A fluorescent dog in the shade of concrete slabs weans a puppy […] Myrmecochory occurs, ants disperse their seeds. The blind crush them. There is no colour, no odour [...] It is endless, incessant […]

Figure 49: Pierre Huyghe, *Untilled,* (2011-2). Alive entities and inanimate things, made and not made. Exhibition view: *Untilled,* dOCUMENTA 13, Kassel, 2012. Commissioned and produced by dOCUMENTA (13) with the support of Colección CIAC AC, Mexico; Foundation Louis Vuitton pour la création, Paris; Ishikawa Collection, Okayama, Japan. Courtesy the artist; Marian Goodman Gallery, New York; Esther Schipper, Berlin. © VG Bild-Kunst, Bonn, 2019. Photo © Pierre Huyghe.

[506] Garcia, p.212.
[507] Boetzkes, p.78.

Figure 50: Pierre Huyghe, *Untilled,* (2011-2). Alive entities and inanimate things, made and not made. Exhibition view: *Untilled,* dOCUMENTA 13, Kassel, 2012. Commissioned and produced by dOCUMENTA (13) with the support of Colección CIAC AC, Mexico; Foundation Louis Vuitton pour la création, Paris; Ishikawa Collection, Okayama, Japan. Courtesy the artist; Marian Goodman Gallery, New York; Esther Schipper, Berlin. © VG Bild-Kunst, Bonn, 2019. Photo © Pierre Huyghe.

> They are faced with the elements from lost orders coming together. Nothing is written and there is nothing to interpret. Each person sees their own world, like so many separate but juxtaposed *Umwelts.*[508]

Despite Huyghe having overseen every step of the site's initial creation, it appears as though "ravaged by an earthquake" (figure 51).[509] The dug-up ground forms craters and hills dispersed with algae-covered pools, contaminated by industrial residues, and vegetation is smothered with fragments of asphalt, piles of gravel and concrete slabs. Huyghe presents us with a world destroyed by both natural *and* human actions. The appearance of familiar beings – a friendly white hound (with a magenta leg), an uprooted oak tree (exposed to rot, decay and colonisation by ants), a bench (overturned so we can't get comfortable) and a sculpture (whose head is devoured by hostile bees) creates a simultaneously accommodating and alienating.

[508] Huyghe in Storr, p.43.
[509] Lavigne, p.214.

Figure 51: Pierre Huyghe, *Untilled,* (2011-2). Alive entities and inanimate things, made and not made. Exhibition view: *Untilled,* dOCUMENTA 13, Kassel, 2012. Commissioned and produced by dOCUMENTA (13) with the support of Colección CIAC AC, Mexico; Foundation Louis Vuitton pour la création, Paris; Ishikawa Collection, Okayama, Japan. Courtesy the artist; Marian Goodman Gallery, New York; Esther Schipper, Berlin. © VG Bild-Kunst, Bonn, 2019. Photo © Pierre Huyghe.

experience.[510] The reclining classical nude – a symbol of fertility along with the bees – parallels the form of the sculptural dog (figure 52). Emilie Walsh pointed out at the 2017 Nasher Prize Graduate Symposium that both of these living bodies have been rendered "artificial and unreal." She argues in her paper 'Exploring Scenarios: Pierre Huyghe's Video-Sculptures' that Huyghe's work explores the "relation of the sculptural to the living", dissolving the barriers between the two, idealising the natural and naturalising the ideal. The "contamination of artworks by natural elements" emphasises the fluidity between the natural and cultural worlds, not as clearly separated as humans would like to believe.[511] Human markers corrode into one flat plane of equivalence.

[510] The upturned oak tree was originally planted by Joseph Beuys at dOCUMENTA (7) in 1982 as part of his work *7000 Oak Trees and* is one of several "markers" dropped into the compost pile that is *Untilled* without contextual information. These all derive from various points of history. The overturned pink bench was part of Dominique Gonzalez-Foerster's contribution to dOCUMENTA (11) in 2002.

[511] Emilie Walsh, 'Exploring Scenarios: Pierre Huyghe's Sculpture-Videos' in *Nasher Compendium*, pp.29-40, p.35-6.

Figure 52: Pierre Huyghe, *Untilled,* (2011-2). Alive entities and inanimate things, made and not made. Exhibition view: *Untilled,* dOCUMENTA 13, Kassel, 2012. Commissioned and produced by dOCUMENTA (13) with the support of Colección CIAC AC, Mexico; Foundation Louis Vuitton pour la création, Paris; Ishikawa Collection, Okayama, Japan. Courtesy the artist; Marian Goodman Gallery, New York; Esther Schipper, Berlin. © VG Bild-Kunst, Bonn, 2019. Photo © Pierre Huyghe.

The potentially dangerous bees estrange his viewers, swarming about their day indifferent to others. "Fluctuating valences of interest" emerge across *Umwelts* that level "into an alienated assessment of irreducibly different worlds." Boetzkes writes how in *Untilled,* "art loses its affordance as a privileged locus and practice of consciousness (Being). Yet it invites speculation about animal worlds on aesthetic terms that point to their withdrawn complexity."[512] The art historian compares the painted leg of the dog (named Human and who, according to Dorothea von Hantelmann, became the trademark of that dOCUMENTA[513]) as "an animalian reconfiguration of the hand of the painter, standing as both the agent that colours the artwork (historically, a human role) and the object of the artwork itself (a vital and brightly coloured part of the installation.)"[514] Huyghe not only challenges his viewers' expectations about the art object and his role as an artist, through his exposure of viewing subjects to the mysterious lifeworlds of other species, he also provokes contemplation about the places of human culture and subjectivity in the natural world.

[512] Boetzkes, p.78.
[513] Hantelmann, p.1.
[514] Boetzkes, p.78.

An environment created for its inhabiting natural forms – organic processes drawing nourishment from decomposing matter – *Untilled* is indifferent to the histories and significations of its participatory objects. People might seem implicated in these processes, yet ultimately, the processes do not depend on human presence to continue. The human viewer is "refused any sense of co-production" and is reminded of their insignificance: they make no difference.[515] *Untilled* is indifferent to the experience of its viewing subjects, and it is indifferent to their difference. It enacts a "destratification" of traditional human categorisation and replaces these with an alternative method of (dis)organisation.[516] What Huyghe presents us with is the growth of elements in relation *to* one another, co-existing and becoming-*with* one another as in Haraway's visions of companion species and multispecies living. The evolution of the artwork does not depend on Huyghe's artistic interventions or the application of linguistic labels but rather on the interconnections of the individual parts in an organic system where life is able to flourish and decay in the cyclical feedback loop that is compostation.

Ron Broglio writes that if we are to move into the space of unthought, "representation should create a friction, reciprocity and exchange between the human symbolic system of representing and the physical world shared with other creatures – the marks and remarks of various *Umwelts.*"[517] *Untilled* achieves this. It brings the natural world with its processes, frictions and tensions into the context of the artwork. Relations form in hostility and harmony, processes continue into generation or decay. Relinquishing his artistic control to his non-human collaborators, Huyghe invites us to do the same.[518] Just like the compost he uses as his model, *Untilled* nourishes contemplations on animal perceptions and relationships, the differences between life and art, and man's position within, and relationship to such systems and life forms. Through a radical repositioning of subjectivity – individual as well as composite, experiencing indifference in copresence – Huyghe reminds us of the worlds in existence outside of human hierarchies. He evades the human desperation to see, name and know the other by placing us in relationship to life we cannot necessarily control or contain with human concepts. As we struggle to position ourselves

[515] Andy Weir, 'Myrmecochory Occurs: Exhibiting Indifference to the Participating Subject in Pierre Huyghe's Untilled (2012) at Documenta 13,' in *Postgraduate Journal of Aesthetics,* 10, (2013), pp.29-40, p.32.
[516] *Ibid*., p.33.
[517] Broglio, xxxi.
[518] Similar to this experience of estrangement the viewer feels from Huyghe's work, the artist describes how *Untilled* developed independently of him. He claimed that he came across its location by chance, and that *"Untilled* wasn't done for dOCUMENTA…but the frame of dOCUMENTA allowed it to occur." Pierre Huyghe in Sky Goodden, 'Pierre Huyghe Explains His Buzzy Documenta 13 Installation and Why His Work Is Not Performance Art' in *BlouinArtInfo,* (August 30, 2012), available: http://www.blouinartinfo.com/news/story/822127/pierre-huyghe-explains-his-buzzy-documenta-13-installation-and-why-his-work-is-not-performance-art?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%253A+artinfo-all+(All+Content+%257C+ARTINFO), [accessed, 8 March 2017].

within his systems, space opens up for us to respond to and hold in curious regard the life of others. We become response-able to who and what we witness here and exposed to the realities of multispecies living. Humility and self-reflection are generated alongside a contemplation of alternative ways of being rooted in relationality that might be practiced when we navigate back to public space as we know it.

Figure 53: Pierre Huyghe, *Untilled,* (2011-2). Alive entities and inanimate things, made and not made. Exhibition view: *Untilled,* dOCUMENTA 13, Kassel, 2012. Commissioned and produced by dOCUMENTA (13) with the support of Colección CIAC AC, Mexico; Foundation Louis Vuitton pour la création, Paris; Ishikawa Collection, Okayama, Japan. Courtesy the artist; Marian Goodman Gallery, New York; Esther Schipper, Berlin. © VG Bild-Kunst, Bonn, 2019. Photo © Pierre Huyghe.

Repositioning Rationality

Before moving on to analysis of Pierre Huyghe's later works, I outline here how I my ideas about Huyghe's practice developed throughout my PhD study. These draw upon and move beyond Haraway's vision of interspecies coexistence. I reposition human rationality here – rather than equalising or neutralising it – in order to assert the capacity for human agency and necessity for human action to change our relationship to other species and the home we all share. I use N.

Katherine Hayles's theories in *Unthought* and Reza Negarestani's *Rationalist Inhumanism* to establish my argument.

Posthumanism and Object-Oriented Ontology are often considered in discussion of Huyghe's work, specifically environmental readings of his practice.[519] Yet, as explored in the introduction to this thesis, what these ways of thinking tend to overlook is the prominence of conscious agency and differing cognitions (across and between human animals, nonhuman animals and technologies) both within the world and Huyghe's practice itself. By identifying individual entities as autonomous agents completely detached from their physical and temporal surroundings, OOO and Posthumanism fail to account for the very embeddedness of organisms within their environment, their pasts and futures, and the interconnecting facets of material processes, cognitive behaviour and non/consciousness, that contribute to ways of life. N. Katherine Hayles writes in her book *How We Became Posthuman* that "becoming posthuman means more than having prosthetic devices grafted onto the body. It means" for Hayles, "envisioning humans as information processing machines with fundamental similarities to other kinds of information-processing machines, especially intelligent computers." What is at stake for the critical thinker is not whether humans have become posthuman but what *kind* of posthumans we will *become*.[520] Unlike Jane Bennett's Vital Materialism which equalises human agency with the agency of nonhumans such as electricity or the weather, Hayles compares human bodies to nonhuman machines but critically acknowledges certain agencies and abilities humans are capable of that nonhumans are not.

Hayles critiques Posthumanism's equalisation of humans and technology. She states: "We may enter into symbiotic relationships with machines but there is a limit to how seamlessly humans can be articulated with" them due to the conscious agency and sedimented histories that the human body contains. Hayles' more recent book *Unthought* investigates the embodiment of life forms, embedded in their surroundings in further detail to propose what she names a *planetary cognitive ecology*. This includes "human, [animal, plant] and technical actors" in her efforts to refocus current ethical enquiry.[521] Jumping off from recent discoveries in neuroscience that "confirm […] the existence of nonconscious cognitive processes inaccessible to conscious introspection but nevertheless essential for consciousness to function", Hayles's *Unthought* challenges the assumption that "consciousness guarantees the existence of the self". She uses Humberto Maturana and Francisco Varela's scientific model of *autopoiesis* to emphasise how "the body itself is a congealed metaphor" embodied and embedded within its environment and histories.[522] *Unthought* argues that

[519] See for example Garcia's reading of *Untilled* in Lavigne.
[520] Hayles, *Posthuman,* p.246.
[521] Hayles, *Unthought,* pp.3-4.
[522] *Ibid.,* p.284. *Autopoiesis* is explained in chapter one.

cognition is much broader than human thinking, awareness or consciousness, and "provides a bridge between human, animal and technical cognitions."[523] Hayles differentiates between thought, intelligence, self-awareness and cognition, to emphasise that although humans and some primates have access to higher consciousness, before that, there is cognition, which emerges out of the material (natural) processes that underlie it. This is shared by almost all mammals, as well as some invertebrates such as octopi and intelligent computers. Cognition, remaining outside of conscious introspection becomes *unthought,* "a kind of thinking without thinking. There is thought, but before it there is unthought."[524]

Information for Hayles is "the result of embodied processes emerging from an organism's embeddedness within an environment", this being "constantly in motion" and in "continuous reciprocal causation."[525] She proposes that "on an evolutionary scale, nonconscious cognition no doubt developed first and consciousness was built on top of it […] reason is [therefore] supported by and requires nonconscious cognition."[526] Hayles summarises nonconscious cognition: "a process" – in contrast to the *attribute* humans name intelligence – "that interprets information" in contexts that connect it with meaning.[527] This is "a mode of interacting with the world enmeshed in the 'eternal present' that forever eludes the belated grasp of consciousness."[528] Centring on interpretation and choice, nonconscious cognition is evolvable, flexible and adaptable, and can be found amongst nonhuman animals and artificial intelligences such as computers and algorithms, but not in material processes such as earthquakes or landslides.[529] However, these three layers – material processes, nonconscious cognition and consciousness – catalyse one another at the boundaries in-between, interpenetrating and interacting so meaning and agency "flow through, within, and beyond the humans, nonhumans, cognisors, noncognisors, and material processes that

[523] *Ibid*. pp.1 and 67 Nonconscious cognition integrates "somatic markers such as chemical and electrical signals into coherent body representations." It "integrates sensory inputs so that they are consistent with a coherent view of space and time" and in this way nonconscious cognition "influences behaviour in ways consistent with its inferences." Therefore, any information coming into "consciousness is always already laden with meaning (that is, interpreted in relevant contexts) by the cognitive nonconscious; it achieves further meaning when it is re-represented within consciousness", p.24 Without being aware of it, consciousness edits events to make them conform to customary expectations. "Consciousness confabulates more or less continually, smoothing our worlds to fit our expectations and screening from us the world's capacity for infinite surprise," pp.27-8 and 46.

[524] *Ibid.,* pp.1 and 9.

[525] *Ibid*., pp.24 and 47. Like Maturana and Varela, Hayles emphasises "that there is no consciousness without re-representation, representation is clearly a major function of the proto-self, site of the cognitive nonconscious and the processes feed forward information to core and higher consciousness", pp.47-8.

[526] *Ibid.,* pp.55 and 59.

[527] *Ibid*., pp.25-6. Again, we see here how our words over determine how we understand the world and the processes ongoing within it.

[528] *Ibid.,* p.1.

[529] *Ibid*., p.29. Hayles explains, "[a] tsunami, for example, cannot choose to crash against a cliff rather than a crowded beach", p.3.

make up our world."[530] Hayles finds meanings within boundaries, as a result of interactions and relations across different bodies and intelligences as a result of their interactions and relations. It can never be confined to one discrete attribute or form. What is crucial is that "as our view of what counts as cognition expands, so too do the realms in which interpretations and meanings evolve." Ideas about the single human viewpoint, or the human as the measure of all things, are transcended. Meaning is no longer absolute "but evolves in relation to specific contexts in which interpretations are performed by cognitive processes that lead to an outcome relevant to the situation at that moment."[531]

Hayles's tripartite structure of material processes, nonconscious cognition and consciousness challenges anthropocentric principles which posit reason as the central motivator of human action that determines our supremacy on Earth. The limited abilities of consciousness – dependent upon mediation from nonconscious processes – in fact suggest that it is nonconscious cognition – embedded in the material processes of the environment – that enables and guides the majority of our actions, this being shared across human and nonhuman, animate and inanimate life. Thought becomes an interplay across bodies embedded in a specific environment in a specific moment. Humans can no longer be contained by the boundaries of our skins nor elevate our capacity for cognition above and beyond other cognitive agents in the world. Hayles reminds us to "become embedded in our environment, not trapped within our capacities for reason and abstraction."[532] Curiosity and awareness for others, and recognition of our shared capabilities and reliance upon beings outside of our bodies, is crucial if all life is to flourish on Earth.

As the faculty of consciousness has made us aware of ourselves, it ironically also "partially blinds us to the complexity of the biological, social and technological systems in which we are embedded" enabling us to "think we are the most important actors and that we can control the consequences of our actions and those of other agents."[533] Instead, "the search for meaning" must become "a pervasive activity among humans, animals, and technical devices" within systems or assemblages, in which interpenetration, interdependence, collaboration and conflict happen in recursive loops of embeddedness.[534] I identify in Pierre Huyghe's more recent installations such types of systems or assemblages which allow humans to actively search for meaning outside of their own capabilities and in so doing reflect on meaning as a product of collaboration and collectivity on a larger scale.

[530] *Ibid*., pp.32-3.
[531] *Ibid*., p.26.
[532] *Ibid*., p.64.
[533] *Ibid*., p.45.
[534] *Ibid.,* p.213.

A De- and Re-Construction of Time and Space

Huyghe's *After Alife Ahead* was installed at Münster Skulptur Projekte in 2017. Now in its fifth carnation, the decennial invites a selection of artists from diverse fields to install an artwork for 100 days in this small German city. For his contribution, Huyghe developed a "time-based bio-technical system in a former ice rink that had closed in 2016."[535] Its list of materials reads:

> concrete floor of ice rink, logic game, ammoniac, sand, clay, phreatic water, bacteria, algae, bees, aquarium, black switchable glass, *Conus textile,* GloFish, incubator, human cancer cells, genetic algorithm, augmented reality, automated ceiling structure, rain.[536]

Huyghe incorporated a surprising mix of animate and inanimate participants, products of the natural, cultural and now, technological worlds. Some objects were visible and subject to control and others completely indiscernible and unpredictable, such as the algorithm or weather. Dorothea von Hantelmann describes the scenery as both "visually and spatially" overwhelming in which "the complexity of processes inscribed could only be vaguely felt at best." The basic structure of *After Alife Ahead* resembled the generative circumstances of *Untilled,* but the conditions were different. Huyghe embraced "a wider diversity of things and modes of intelligence" creating "a more heterogeneous and complex" system for humans to enter.[537] *After Alife Ahead* formed an entangled assemblage of myriad modalities, intelligences, temporalities and ways of life. Human, animal, plant and technological agents functioned together, reflecting the *tripartite framework of (human) cognition as a pyramid* that Hayles illustrates in *Unthought.*[538] Human viewers enter a world in which material processes, nonconscious cognition and consciousness interact to generate new meanings emerging in-between.

Talking to journalist Andrew Russeth for *Artnews,* Huyghe explains how "[the] place [needs to have been] destroyed, so I could actually act on it as I wanted."[539] The creation of *After Alife Ahead* involved extensive architectural de- and re-construction, leading to the creation of a space

[535] Huyghe, *Münster*, p.210.
[536] *Ibid.*
[537] Hantelmann, p.14.
[538] See Hayles's diagram on p.40 of *Unthought.*
[539] Pierre Huyghe in Andrew Russeth, 'Constant Displacement: Pierre Huyghe on his work at Skulptur Projekte Münster, 2017' in *Artnews,* (26/06/17), available: http://www.artnews.com/2017/06/26/constant-displacement-pierre-huyghe-on-his-work-at-skulptur-projekte-munster-2017/, [accessed 5 July 2019].

Figure 54: Exhibition view of Pierre Huyghe, *After Alife Ahead,* (2017), photo by the author.

Figure 55: Exhibition view of Pierre Huyghe, *After Alife Ahead,* (2017), photo by the author.

incomparable to the typical human experience.[540] Including a range of organisms constantly mutating and evolving, this work demonstrates how life forms and the systems they inhabit develop both independently and interdependently. We witness here how material processes catalyse and interact with nonconscious cognitive functions which in turn feed into human consciousness and rationality.[541] Huyghe's work makes his viewers aware of the spaces and time frames of unthought that are crucial to human subjectivity.

After Alife Ahead was located about two miles from the city centre in a *Technologie* park. The glass of the doors to the disused ice rink were blacked out, increasing suspense as visitors queued to enter. When my turn arrived, I went through the door to feel an icy temperature drop. This was a space that might have been victim to natural disaster, man-made destruction, or a combination of the two, reminiscent of *Untilled* (figure 54). At once destroyed and destroying, I struggled to get my bearings here. I walked out gingerly over what remained of the ice-rink's original floor, paint-marks still visible on its concrete surface (figure 55). Huyghe had carefully planned the upturning of the floor. Inspired in part by a retro-futuristic grid on the rink's ceiling, he took the Stomachion logic puzzle invented by Archimedes, which involves cutting up a square into a tangram, and overlaid it onto the floor to create a new grid. A 2000-year-old thought experiment, this system of reason reminds viewers of Huyghe's meticulous methods to an apparent madness.

The artist emphasises the logic and coordination of a multiplicity of components and temporalities in the construction of this site. This is reflected in the title *After Alife Ahead* that juxtaposes both "pre- and post-temporalities", just as the ancient puzzle contrasts with the contemporary augmented reality app.[542] Huyghe makes visible the overlapping nature of time, reminding his viewers that the present moment is never separated from that which came before it, or what will follow. And this time frame even reached beyond human time. The artist explains in an interview with curator Hans Ulrich Obrist that by overlaying the Stomachion puzzle onto the floor time and time again as he cut deeper into the ice rink's foundations, eventually he reached the groundwater and "sand from the last ice age." This is a space not confined to human history but instead is embedded with a universal significance that we have never known.[543]

A black aquarium provided the centrepiece of the site (figure 56). It stood elevated on a cement platform, housing two enigmatic creatures for viewers to encounter. Talking about his earlier work *Zoodram 4,* (2011) – a live marine system within a glass tank containing a hermit crab

[540] Huyghe, *Münster,* p.210.
[541] Hayles, *Unthought,* p.40.
[542] Hantelmann, p.17.
[543] Pierre Huyghe, 'Hans Ulrich Obrist in Conversation'.

Figure 56: Exhibitions view of Pierre Huyghe, *After Alife Ahead,* (2017), photo by the author.

Figure 57: Exhibition view of Pierre Huyghe, *After Alife Ahead,* (2017), photo by the author.

wearing a Brancusi mask – Huyghe explains how "the aquarium is a space of separation."[544] As in a museum, "different species from different places around the world […] are gathered together in a system supposed to be in nature." Life is embedded in this artificial world and evolves and generates different ways of being in different forms of equivalence. Without hierarchy, neither cultural nor natural meanings dominate, and all are allowed to share the same stage. The aquarium becomes "a kind of theatre, where the living and the non-living establish interesting contact" and "take on the colour of the environment."[545] What interests the artist is "the moment of suspension, in boredom or hypnosis in which you can find the equivalence between the encounter and the thing that is in front of you."[546]

A tiny fluorescent fuchsia fish with a dash of yellow occupied the tank (figure 57). My eyes mirror its form, darting from side to side as its body flashes in and out of view in coordination with the intermittent spells of transparency as the black opaque glass switches.[547] Mesmerised by its movements, this encounter with otherness suspends my thinking for a moment to allow the tiny creature to penetrate my consciousness. A copyrighted animal, the GloFish© confuses the boundaries between "creator and creature by its very effort to draw a clear line between subject and object, original and copy, valued and valueless." For Donna Haraway, this concept of property is locked in anthropocentric beliefs of the human right to appropriate nature for our own production but also emphasises how nature and culture are inextricably intertwined.[548] Huyghe's incorporation of this natural/cultural hybrid reminds us that any ideas about untouched nature cannot stand. Humans have managed to successfully tarnish and condition all other life forms with whom we share the planet. We see Nature in Culture and Culture in Nature. Neither one can be extricated from the other.

The GloFish shared its tank with one of the world's most dangerous sea creatures (figure 58). The highly venomous *Conus textile* is a species of cone snail also known as the cloth of gold. A

[544] Pierre Huyghe quoted in Allard van Hoorn, 'Pierre Huyghe: The Moment of Suspension. Interview with Allard van Hoorn' in *Domus,* (October 2011), available: https://www.domusweb.it/en/art/2011/10/18/pierre-huyghe-the-moment-of-suspension.html, [accessed 30 October 2019]. The mask, originally by Constantin Brancusi and entitled *La Muse Endormie* (1910) was cast in resin and fashioned to the shell of the hermit crab for *Zoodram 4*.

[545] Bourriaud, p.101.

[546] Huyghe in Hoorn.

[547] GloFish® were initially developed to detect water pollution by selectively fluorescing in the presence of environmental toxins. However, this scientific tool has evolved into a consumer product as a variety of different trademarked GloFish® are now available in pet stores and online. 'GloFish', *Wikipedia.org,* available: https://en.wikipedia.org/wiki/GloFish, (n.d.) [accessed 30 October 2019.]

[548] Donna J. Haraway, *Modest_Witness@Second_Millennium.FemaleMan(c)_Meets_OncoMouse(™)* (London: Routledge, 1997), p.71.

hardy mollusc cunningly self-enclosed, this is an extremely individuated animal.[549] I stand hypnotized by its fingery eyes, its antennae reaching out to me in a stance of aggression.[550] I feel almost touched by the materiality of this gastropod, completely forgetting the poison within whilst admiring the details of its shell. I am allured by this creature yet cannot gain a true understanding of its form. Rather our contact remains superficial. As it retreats into its shell, I am reminded of the bees who escaped into their holey space. My anthropocentric beliefs that I can see, name and know the world are challenged. The inhabitants of Huyghe's aquarium enable a deferral of human meaning and allow one to become curious about and captivated by the unknowable worlds of these radical others. We are placed in relation to them and our curiosity is provoked. Some form of response is allowed to flourish, and human supremacy is subverted.

Slithering weightlessly across the floor of Huyghe's hi-tech aquarium, this critter who at first glance appears Lilliputian, in fact conceals a far more toxic interior. The *Conus textile* is prized for its glassy shell, adorned with unique, shingle-like patterns ranging from light to dark brown with a slight yellow overlapping.[551] This ornamentation is an example of cellular automata and provided Huyghe with a pattern he used to regulate other factors within *After Alife Ahead*. He describes how he "scanned the shell, which is made out of small or larger kinds of triangle shapes, and that became the score that either opens or switches off the glass."[552] That pattern generates sound heard throughout the ice rink and, "as the glass switches on or off, it triggers the opening or closing of the pyramids that are on the ceiling."[553] Huyghe appropriates the aesthetic function of the shell to fabricate a method of control within his system. Nature is cultured and culture is natured. All entities exist in interdependence.

[549] Found in the Indian Ocean, spreading from Australia to Africa and Hawaii. They grow up to 10cm in size. 'The Cloth of Gold' on *TheCultureTrip.com,* available*:* https://theculturetrip.com/pacific/australia/articles/the-cloth-of-gold-7-facts-about-the-textile-cone/ [accessed 14/10/17].

[550] "Fingery eyes" is a phrase I appropriate from Eva Hayward's doctoral dissertation. Hayward coins the phrase to describe the experience of feeling, seeing and touching all at once when encountering coral in a moments of "haptic visuality." pp.109-126.

[551] These snails are highly prized across the globe for their beautiful shells, despite the strength of their deadly venom, conotoxin, able to break through rubber gloves, wetsuits and skin, having the power to kill sixty grown adults, 'Cloth of Gold'.

[552] Cellular automaton are rule-based systems discovered in mathematics in the 1960s and 1970s, which were critical to the development of computer code and chaos theory. "Cellular" in this context refers to a pattern in which the development of each cell is determined by rules concerning its neighbours. Such patterns have also been found in nature, for example, in flower petal growth or the markings of animals. 'Cellular automaton' on *Wikipedia.org,* available*:* https://en.wikipedia.org/wiki/Cellular_automaton, (n.d.) [accessed 12 December 2019].

[553] Huyghe in Russeth.

Figure 58: Exhibition view of Pierre Huyghe, *After Alife Ahead,* (2017), photo by the author.

A solitary placed component within this biotope was an incubator containing spawning human cancer cells of the HeLa type (figure 59). HeLa makes up an immortal cell line used in scientific research. It is the oldest and most commonly used human cell line, which was derived from cervical cancer cells taken in 1951 from Henrietta Lacks, an American cancer patient who died in poverty shortly after.[554] The rate of growth of the HeLa cancer cells was determined by various measurements taken by hidden sensors distributed across the space, which transmitted algorithms concerning the rink's vitality to the incubator. Increased vitality means more cell divisions, lower rates of vitality means less.[555] This alarming cell propagation, striving on the fruits of flourishing life, introduces an invisible source of paranoia into this world.[556] This is not a neutral space of aesthetic experience but rather somewhere in which humans feel both intrigued and threatened at the same time.

[554] Cell biologist George Otto Gey discovered that Lacks' cells could be kept alive, and was able to isolate one specific cell, multiply it, and develop a cell line. The cell line was found to be remarkably durable and prolific which allows its extensive use in scientific research. 'HeLa' on *Wikipedia.org,* available: https://en.wikipedia.org/wiki/HeLa, (n.d.) [accessed 12 December 2019].

[555] Emily McDermott, 'Pierre Huyghes latest project is part biotech lab, part scene from a sci-fi film' in *Artsy,* (19/06/17), available: https://www.artsy.net/article/artsy-editorial-pierre-huyghes-latest-project-biotech-lab-scene-sci-fi-film, [accessed 19 April 2018].

[556] Timothy Morton highlights how viruses as "pharmakos" at once generate and eliminate life. As the possibility condition for 'lifeforms'" these "non-living patterned strands" form "truly foreign intelligences" that we remain fully able to understand or control. *Dark Ecology,* p.103.

Figure 59: Exhibition view of Pierre Huyghe, *After Alife Ahead,* (2017), photo by the author.

Whilst the HeLa cells divide in the incubator, one sees an increase in the number of pyramid shapes appearing on the augmented reality app. These cells grow and manifest themselves into an evolving mediated space. Viewed on the app, the blocks then disappear out into the infinite skies once the vents in the ceiling open, as determined by the aquarium glass switching on and off (figure 60). These pyramidal shapes on the app seamlessly interweave the inside and outside, the artificial, the natural, the virtual and the physical worlds as well as providing a means for human viewers to temporarily sync with the system. As Hantelmann writes, "the work's very construction revealed the artistic disposition in which nature and culture, the prehistoric and the artificial, and modernity's great divides are literally layered on top of each other."[557] The coalescence of life, times, locations and lived experience within *After Alife Ahead* creates an unpredictable system that seems to manifest our current state of being on Earth. Rather than answering any questions, the installation serves as a reminder that we are all chimeras, cyborgs, companion species who have co-evolved in intimate relation with a conglomeration of other species, toxicities and technologies, many of which we are unable to fully understand.

At first glance Huyghe's landscape might seem like a post-apocalyptic scene of devastation, human life erased and replaced by all manner of evolutionary mutants. The artist places an array of diverse organisms that we normally believe estranged from one another in contact under one roof. Yet *After Alife Ahead* does remain open for human entry. As the viewer descends from the elevated

[557] Hantelmann, p.13.

Figure 60: Site view of Pierre Huyghe, *After Alife Ahead,* (2017), photo by the author.

concrete sides of the ice rink, leaving behind their superior point of view to navigate the winding paths wrought with mounds and clefts over the desert-like landscape, they discover a wealth of life of all kinds from a new perspective. This encounter with radical alterity enables recognition of the vast similarities and differences between and across bodies and the worlds they inhabit, and that no one perspective can ever be absolute.

A contact zone with these species is established. Huyghe suggests how humans can no longer name themselves as above other species, but rather in relationship to and evolving with them. The nonhuman life in this work remain distinct from one another yet all contribute to the larger system. And when viewers traverse its paths, the installation provokes the consideration of our own roles in the lives of these species and the spaces of nonmeaning and unnameability that forever remain exterior to our own knowledge systems. Different species cognise, interact and communicate with one another through subtle gestures and indiscernible modes of translation. We see how material processes feed into nonconscious cognition which in turn influence our consciousness and self-awareness. At the same time, we see how nature and culture are inextricably connected. Material processes, technologies, plant and animal life are all positioned here as contributing to the construction of what we call culture. We see how Huyghe's work reflects Hayles's theories and models a cognitive planetary ecology which respects the interdependence of different intelligences and the possibilities that emerge in-between the categories we normally distinguish – most importantly those of nature and culture and human, animal and machine. Yet despite Huyghe's imbrication of these concepts, what cannot be overlooked is the capacity for human application of technology via *rationality* in the creation of this space. This is a space where solidarity between humans and nonhumans can be felt. Yet this is a space created solely by humans and their capacity for rationality. I shall now focus my attention on Reza Negarestani's *Rational Inhumanism* to reposition rationality as a human capacity which cannot be overlooked and must in fact be embraced as we approach ever greater environmental emergency.

Rational Inhumanism

Artist and academic Steve Klee contributed a paper on *After Alife Ahead* to the journal *Antennae* for its issue 'Truth. Climate. Now' published in the summer of 2018. Klee's reading of Huyghe's installation is positioned against readings of the work which emphasise how *After Alife Ahead* makes clear the lack of control humans hold over the natural and technological worlds. Emily McDermott writing for *Artsy*, for example, describes how "*After ALife Ahead* […] acutely reflects the extent to which we attempt to intervene in these processes through technology, believing that we can bring logic and control to them." She emphasises our inability to exert power over nature and our own prostheses using rationality, thereby decentring and destabilising human supremacy.[558] Klee instead draws upon Peter Wolfendale and Reza Negarestani's Rationalist Inhumanism. He argues that *After Alife Ahead* reminds human viewers of their impressive rational capacities and the

[558] McDermott.

importance of the human sapience and animal sentience distinction in our time of ecological collapse and post-truth. Rationality being our "sole means of cognitive access to nature", works like *After Alife Ahead* create valuable opportunity for us to learn more about nonhuman life by placing us in a shared space. Then a relationship across species lines can form. Technology becomes the tool that we can use to "grease the transition from solidarity to action."[559] *After Alife Ahead* reminds us that we humans *do* have the powers to interject into climactic breakdown and species extinctions. Although our knowledge may not be infinite, the knowledges we do have can be harnessed towards a positive outcome.

Reza NegarestanI invokes Michel Foucault's tautologically enduring image: "the self-portrait of man will be erased, like a face drawn in sand at the edge of the sea." For the Iranian philosopher, Foucault's concept of humanity as unstable, transitory, and even fragile, grounded only in anthropocentric and empirical truths, reflects his own philosophical thought. Rationalist Inhumanism is a "*universal* wave that erases the self-portrait of man drawn in the sand […] by removing supposed evident characteristics and preserving certain invariances."[560] Negarestani challenges traditional humanist thought, which self-identifies the exceptionality of humankind based on its possession of rationality (amongst other traits), to instead suggest that reason is an autonomous product of the natural world. Having explored Hayles's *Unthought,* Negarestani's argument becomes more comprehensible. Hayles argues that material processes lay the basis for human (and nonhuman) life and thought. These processes feed into nonconscious cognitive abilities which in turn catalyse and mobilise consciousness, leading to higher or secondary consciousness, that is, rationality. Human rationality can therefore be seen as a product of nature, emerging out of material processes and nonconscious cognition. Yet at the same time, higher consciousness and its attributes are what *currently* mark humans out as different from the rest of nature.

For Negarestani, it is not 'Man' who autonomously controls reason as an inherent and fundamental element of subjectivity. In fact it is Man who lies in the hands of reason itself, it being a self-cultivated, self-determined and autonomous program, "*over which human has no hold."*[561] Subject to the constant sweeping revision of reason, 'Man' becomes nothing but a set of functions that can all be recognised in diverse material substrates and forms of life – including humans, animals, aliens and machines.[562] Negarestani's inhumanism rejects traditional features of humanism

[559] Klee, p.15
[560] Reza Negarestani, 'The Labor of the Inhuman, Part I: Human' in *e-flux,* #52, (February 2014), available: https://www.e-flux.com/journal/52/59920/the-labor-of-the-inhuman-part-i-human/ [accessed 14 February 2019].
[561] Negarestani, 'The Labor of the Inhuman, Part II: Inhuman' in *e-flux,* #53, (March 2014), https://www.e-flux.com/journal/53/59893/the-labor-of-the-inhuman-part-ii-the-inhuman/ [accessed 10 July 2019].
[562] Peter Wolfendale, 'Rationalist Inhumanism (Dictionary Entry)' on *Academia.edu,* available:

grounded in biology, psychology and the cultural history of *Homo sapiens.* Rationality is instead "an abstract protocol that has been functionally implemented by the techno-linguistic infrastructure of human culture."[563]

Negarestani distinguishes between human *sapience* and animal *sentience,* and in so doing places humanity upon a continuum with the rest of nature, but as different. Humanity is able to acknowledge rational and social norms and engage in discursive practices, unlike animals who remain bound by natural laws. Human beings are afforded "techno-agency and objective knowledge" as well as sophisticated representational concepts that develop into collective discursive practices. They therefore "are 'better' able to achieve certain ends than most natural, causal, processes" explains Klee. Rationality at once grants humans a solidarity with nature but also "makes room for and works across difference."[564] Through sapience and the resultant ability to conceptually classify the world through language – establishing shared knowledge structures – humanity is awarded a capacity for collective action and responsibility towards sentient nature. Rationality enables us to create collective spaces where relationships between humans and nonhumans can develop and resultant action to preserve and enhance life can be generated.[565]

Through a *capacity* for reason – distinct from an *attribute* such as blue eyes or blonde hair – humans have been able to engage in discursive practices, facilitate collective action and understand the world objectively.[566] Only in this way can a motivator for action be established. *After Alife Ahead* is a space clearly and *impressively* modified by human intervention. This is a world that no other species can currently create. As Klee writes, "*After Alife Ahead* contributes to the development of a constituency who recognise the justified authority of science" in our increasingly post-truth world.[567] And at the same time, the installation exposes the intricacies and unknowability of nonhuman intelligences. *After Alife Ahead* "prompts an appreciation not only for the capacities of Huyghe and his team but also of rational difference in general." Klee continues, "on viewing the piece, a spectator understands humans as capable of objective thought and its technological application" and in so doing "articulates those ways that the rational actor is both different from *and* in continuity with nature."[568] The human animal is *part of nature as different* and Huyghe's work, as a

https://www.academia.edu/26697819/Rationalist_Inhumanism_Dictionary_Entry_
[accessed 14 February 2019].

[563] *Ibid*.

[564] Klee, p.7.

[565] A similar argument could be applied to Tomás Saraceno's work with spiders explored in chapter 3.

[566] I shall remind my reader here that many humans believe our rational intelligence to be an attribute of *Homo sapiens,* but it is crucial to my, Hayles's and Negarestani's arguments to remember that rational intelligence is *not* an *attribute* inherent to humanity but a *capacity* we *currently* have.

[567] *Ibid*., p.17. Klee directly references the Trump administration and its dismissal of scientific fact about global warming.

[568] *Ibid*., pp.13 and 14.

self-contained system brought into being by human agents capable of rationality, demonstrates this relative positioning to his viewers. Placing viewers and himself both in continuity with and in separation from the work, Huyghe reminds us how the power of reason can be revised and renegotiated to address the realities of nonhuman *with* human worlds emerging in *After Alife Ahead*. Now humanity might begin to try to solve the problems its anthropocentrism has for so long been causing our environment, having been reminded at once of its powers for alarming devastation and astounding creation.

The Paradox of Translation: An Impossible Obligation

Pierre Huyghe's *UUmwelt* was space of porosity and mutability. Displayed at the Serpentine Gallery, London, from October 2018 to February 2019, this exhibition offered the next step in the evolutionary trajectory of the artist's practice. Huyghe placed together different forms of nonhuman cognition, biological reproduction, instinctual behaviour, material processes and human consciousness. Typical binaries collapsed, and alternative meanings materialised in the spaces in-between. Despite its apparent containment within the gallery walls, *UUmwelt* leaked out into the surrounding Kensington Gardens and was eternally subject to factors introduced by viewers. These viewers were brought into co-presence and interconnection with knowledge forms in a space of indifference. However, Huyghe's methods of translation enabled steps towards the unveiling of meanings normally left unthought.

This exhibition was a complex system within which interdependent agents self-organised and co-evolved out of unstable relationships. Upon entry to the space, viewers were met by the buzzing of 50,000 bluebottle flies, an array of olfactory stimuli and large LED screens displaying flickering images of forms *not quite* describable (figures 61 and 62). These images were created during Huyghe's collaboration with the Kamatani Research Institute in Kyoto, Japan, who use a "neural network-based artificial intelligence to decode and predict what a person is seeing or imagining, referring to a significantly larger catalog of images."[569] Huyghe asked participants to imagine a "new world" in which "animal, human and sentient machines share a common imaginary

[569] Kyoto University, 'Take a look, and you'll see, into your imagination' (02/06/17) available: https://www.kyoto-u.ac.jp/en/research/research_results/2017/170522_1.html, [accessed 31 October 2019]. This method immediately challenges the unicity of the human mind, suggesting our imaginations can be matched to a stock of generic images. Journalist Hettie Judah has described the "ego-denting" suggestion "buried in the work" wondering if Huyghe's exhibition suggests that maybe the mind does not set us apart from other people in 'The mind gardener: the machine that turns your thoughts into art' in *The Guardian,* (02/10/18), available: https://www.theguardian.com/artanddesign/2018/oct/02/pierre-huyghe-serpentine-gallery-london, [accessed 30 October 2019].

Figure 61: Pierre Huyghe, *UUmwelt,* (2018 – ongoing). Deep image reconstruction, sensors, sounds, scent, incubator, flies, sanded wall, dust. Exhibition view: *UUmwelt,* Serpentine Galleries, London, (2018), Courtesy of the artist and Serpentine Galleries, London, © VG Bild-Kunst, Bonn, 2019. Photo © Ola Rindal.

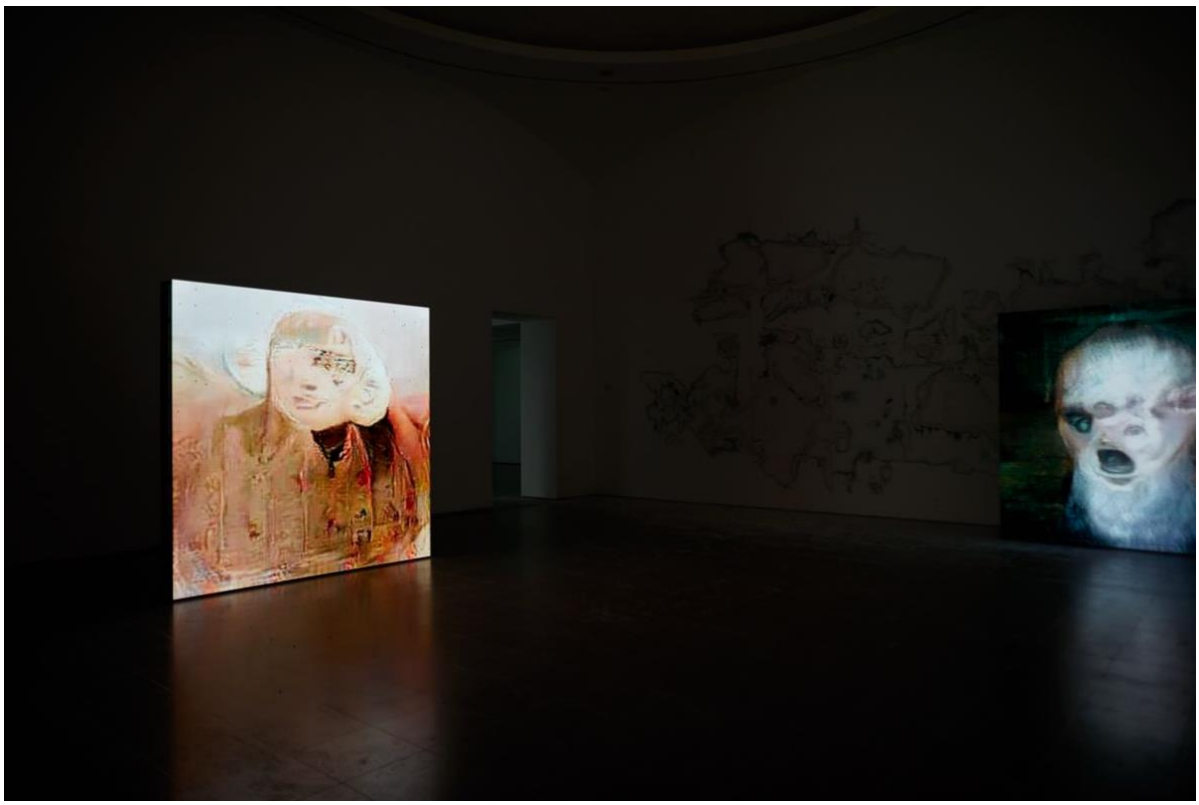

Figure 62: Pierre Huyghe, *UUmwelt,* (2018 – ongoing). Deep image reconstruction, sensors, sounds, scent, incubator, flies, sanded wall, dust. Exhibition view: *UUmwelt,* Serpentine Galleries, London, (2018), Courtesy of the artist and Serpentine Galleries, London, © VG Bild-Kunst, Bonn, 2019. Photo © Ola Rindal.

future" whilst inside an fMRI scanner.[570] Realising Haraway's cyborg ontology, this world eerily points back to humanity's animal past, and to a (possibly not-so-distant) future where our bodies and technology have become totally intertwined.[571] The translated patterns of brain waves were then fed into a deep neural network and cross-referenced against a database of known patterns in an attempt to match and translate the original imaginations into reconstructions.[572] This combination of modes and methods creates a surreal effect, we don't quite know where we are or what is going on.

Viewers are exposed to a set of stuttering translations, collages of familiar images unspecifiable in their final form. We are allured and alienated at once. The images retain uncanny traces of something we don't have the words for (figure 63).[573] The unfinished nature of the images – fleeting and flickering – hint at the depths of the Freudian unconscious which remains inaccessible to us except in our dreams (figure 64). The uncanny being a crisis of the proper or what is one's own, these images disturb and disrupt individual experiences of personhood as well as larger understandings of 'the human' and its experience of identity. They reveal something liminal, unnameable and unrecognisable at the very heart of the self.[574] Intimately entwined with language, when uncanny strangeness is at issue, humans struggle to adequately represent to themselves and others what is going on within and without them. Nicholas Royle describes that what is "happening is always a kind of un-happening" where time and space are unsettled and self-orientation becomes impossible.[575] Inside *UUmwelt* viewers become interpreters attempting their own methods of translation, drawing comparisons between what they see on a screen and nameable forms such as an apple, a dog, or a Francis Bacon face. But these surreal and chimerical images forever elude our knowing and naming gaze. Huyghe describes his method as "a collective production of imagination between two kinds of intelligences."[576] *UUmwelt* stands as a bridge tentatively connecting two sets

[570] Pierre Huyghe quoted in Judah. The artist will provide no more detail than this, inhibiting his viewers from gaining total knowledge and understanding of the steps taken in the creation of *UUmwelt.*

[571] In some ways these imaginations reflect our contemporary human condition where we are becoming increasingly dependent on our technological prostheses and where algorithms track and predict our behaviour.

[572] Nicholas Royle writes that "an uncanny effect is often and easily produced when the distinction between imagination and reality is effaced." *The Uncanny,* (Manchester, Manchester University Press, 2003), p.13.

[573] The very uncanniness of these forms reflects the narcissism of the human gaze, and the limitation of human perception. Upon looking at Huyghe's images, human viewers cannot help but attempt to draw them into their own field of meaning and perception. The images are unable to be left autonomous, with a meaning in themselves.

[574] Royle, p.1.

[575] Royle, p.2.

[576] Huyghe with Obrist.

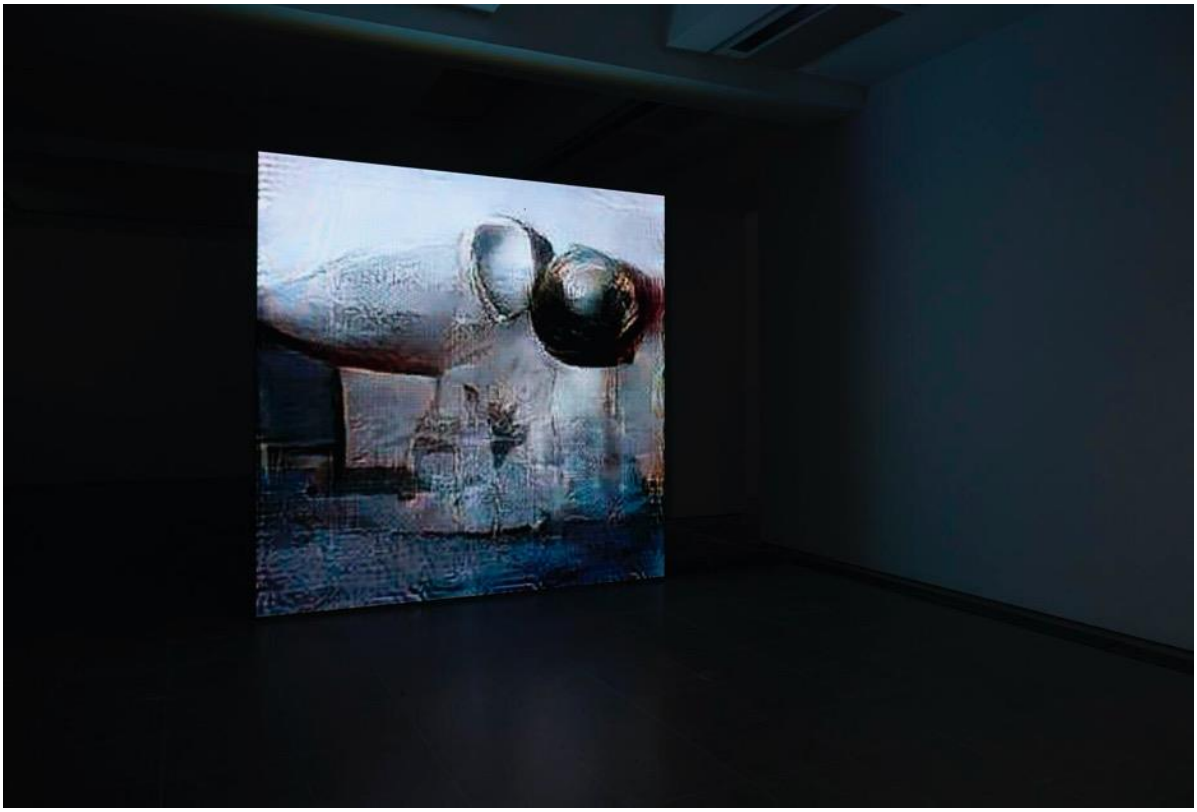

Figure 63: Pierre Huyghe, *UUmwelt,* (2018 – ongoing). Deep image reconstruction, sensors, sounds, scent, incubator, flies, sanded wall, dust. Exhibition view: *UUmwelt,* Serpentine Galleries, London, (2018), Courtesy of the artist and Serpentine Galleries, London, © VG Bild-Kunst, Bonn, 2019. Photo © Ola Rindal.

Figure 64: Pierre Huyghe, *UUmwelt,* (2018 – ongoing). Deep image reconstruction, sensors, sounds, scent, incubator, flies, sanded wall, dust. Exhibition view: *UUmwelt,* Serpentine Galleries, London, (2018), Courtesy of the artist and Serpentine Galleries, London, © VG Bild-Kunst, Bonn, 2019. Photo © Ola Rindal.

of meaning – the human and the artificial. The images tempt us outside of our comfort zones, but never fully allow us to penetrate this radically different mode of thinking.

The bluebottle flies buzz around and across the five large screens, casting shadows on their picture and introducing an additional discomfort into the mix.[577] As viewers wander through the galleries, all of their senses are engulfed in nonmeaning. Fluctuating smells trigger different associations for each person and a muffled soundtrack drifts in and out of earshot.[578] Viewers try to make sense of their senses, as ears, eyes and nose are bombarded with stimuli. Yet in this space, nothing resolves. Each participant's experience remains fully subjective whilst being subject to the porous mutability of the gallery and its endless deferral of meaning. Hidden sensors in the gallery capture fly and visitor movements as well as temperature, light and humidity changes, creating an endless feedback loop in a process of becoming.[579] And although each player within this system may be indifferent to the others, the powers of affect across bodies continuously influence the space and viewing experience. These powers of affect become palpable as the temperature rises or humidity levels decrease. Huyghe reminds us of our profound impact on our environments, as well as our existence of living in relation with others. Never reaching stability nor constancy, this system reflects the living condition of being-with otherness in a time of increasing unpredictability.[580]

Huyghe's title originates from Jakob von Uexküll's theories about animal *Umwelts,* where each living being inhabits its own sensory world of perception.[581] However, the stuttering title of *UUmwelt* is "a nod to the idea of bypassing the *Umwelt* process" describes the exhibition's curator Rebecca Lewin. Instead, Huyghe wished to explore "the possibility of connectivity and communication that can exist between entities." *UUmwelt* suggests that "if we can bypass sense, we have the potential to be able to understand and interpret each other's thoughts and ways of

[577] These flies congregated around a rotunda in the main gallery, which had been transformed into an incubator birthing thousands of flies where they were fed sugar. Without protein, the flies were unable to breed and with their short two-week lifecycle, had to be replaced and replenished throughout the course of the exhibition. This process adds an additional, shorter temporal dimension into the exhibition which itself ran for four months. The exhibition also provided a leaflet detailing how steps were taken to care for the flies. Huyghe addresses ethical issues here about the inclusion of live animals in his work, something he has been criticised for in the past.

[578] The soundtrack was also developed from brainwave scans.

[579] These factors are usually monitored in museological conservation, maintained at a constant, regulated level. However, *UUmwelt* reverses this and instead allows the mutation of the artwork in accordance with the fluctuations of these variables.

[580] Even the gallery walls exposed their history, sanded down to liberate the layers of paint from previous exhibitions since the Serpentine's renovation in 2000. Huyghe recalls his realisation that the patterns on the walls became reminiscent of the images themselves, *UUmwelt* demonstrates the human need for association and meaning in the world, our endless attempts at translation. We could compare this conglomeration of past and present to the instability of the images on screen themselves, unable to resolve themselves even as they evolved towards a future version of themselves. Huyghe with Obrist.

[581] See Uexküll, *Foray.*

thinking."[582] Huyghe reaches across the life-worlds of different entities, finding unsettling meanings emerging in-between. After multiple stages of translation, *UUmwelt* displays a selection of images which have moved through human, to artificial and now back to human cognition. These represent differing conceptions of experience – the human and the technological – yet the results are not quite conclusive. *UUmwelt* comes to represent Jacques Derrida's paradox of translation, an impossible yet necessary obligation.[583]

Human anthropocentrism originates from the belief in our ability to see, name and thus know. The world and its inhabitants become available for our (ab)use and disposal.[584] We have come to occupy a lifeworld in which meaning emerges *only* from visibility and nameability. However, *UUmwelt* evades these possibilities. Processes remain indiscernible, images unrecognisable, individual impacts invisible and the artistic origins of the work cannot be located. This constant deferral of (human) meaning recalls Derridean *différance.* Derrida strove to show the futility of the human search for meaning, traditionally thought to be located in the word and origins of the human subject. The philosopher's method of deconstruction demonstrates how each sign's meaning is dependent on its difference from other signs, thus assigning each a trace or underlying meaning that may not necessarily be evoked but cannot be erased.[585] Meaning for Derrida is thus endlessly deferred, never to be fixed nor contained by human language, knowledge or subjectivity. Huyghe's exhibition materialises Derrida's thinking. Here neither origin nor meaning can be located nor ascertained. Binary oppositions are foreclosed and instead unspoken unthought emerges into the frame. Final definition is escaped and human knowledge through language is cast into doubt.

Nightmarish and haunting, *UUmwelt* reminds us that the human mind and condition is not stable, but forever influenced by external factors (material processes or nonhuman nonconscious cognitions) which remain outside of conscious control. Marina Warner writes how in his work, Huyghe "identifies a shared zone of anxiety" in which one's personal identity and faculties of consciousness are reoriented in response. The feminist historian describes how "[p]ersonhood shifts from the stable mind-body union" and becomes instead furnished with memories and imaginations of the other in a state of "paranoid […] techno-possession."[586] By melding together human and artificial intelligences, *UUmwelt* replicates lived anxieties about the increasing agency of A.I. in our

[582] Rebecca Lewin, 'Pierre Huyghe: UUmwelt', *Serpentine Galleries,* 30/10/18, on *YouTube,* available: https://www.youtube.com/watch?v=enx-vyWn7UU, [accessed 5 July 2019].
[583] Arka Chattopadyhay, 'Jacques Derrida and the Paradox of Translation' on *Academia.edu,* p.1, available: https://www.academia.edu/589470/Jacques_Derrida_and_the_Paradox_of_Translation_You_must_go_on._I_can_t_go_on._I_will_go_on._?auto=download, [accessed 5 July 2019].
[584] In *Genesis* God grants Adam the ability to see and thus name the animals.
[585] See Derrida, *Of Grammatology.*
[586] Marina Warner, 'Pierre Huyghe: Vacant Possession' in Cooke and Hoban, pp.129-146, p.133.

Figure 65: Pierre Huyghe, *UUmwelt,* (2018 – ongoing). Deep image reconstruction, sensors, sounds, scent, incubator, flies, sanded wall, dust. Exhibition view: *UUmwelt,* Serpentine Galleries, London, (2018), Courtesy of the artist and Serpentine Galleries, London, © VG Bild-Kunst, Bonn, 2019. Photo © Ola Rindal

contemporary world, threatening to overcome our bodies and minds. But it penetrates even deeper. *UUmwelt* aligns human, animal and artificial intelligences, probing consideration that the human mind is not as unique or autonomous as the post-Cartesian world has reinforced. Instead, the mind is displayed as contingent and open to unpredictable stimuli and uncanny affect from otherness. Huyghe cultivates his viewer's awareness of the borders that adjoin them to other worlds by disrupting their experience of time, space, history, memory and self. This is not an experience of autonomy, but estrangement from oneself. Despite Huyghe's sophisticated technological translations, these other worlds remain alarmingly untranslatable. The human *Umwelt* is at once laid bare to the worlds of others and subjected to their expressions, yet the meanings endlessly defer and evade human understanding.

Huyghe reminds us that despite our attempts to translate the world into our own language, we can never burst the bubble of even our own *Umwelt*. Although we use language to name and control the world, words are not infinite in scope. *UUmwelt* highlights these limits whilst at the same time suggesting that even our immediate subjective experience cannot always be translated into words. We are exposed to traces from our subconscious erupting into conscious experience, which alarmingly remind us that something alluring and alienating resides at the heart of the self. Human control over this space is destabilised whilst even our control over our own experience is diverted. Huyghe hints at a world where differing modes of intelligence interact and co-exist which can only be translated into our own language if we bypass what we think we know and push our senses beyond their limits. Only when we delve into the realm of unthought might we reach beyond our own *Umwelts* to make a fleeting connection with the *Umwelt* of another. This very impossibility is now obligatory.

Animal Mirror

To conclude this chapter, I offer an introduction to Pierre Huyghe's 2014 video *Untitled (Human Mask).*[587] This is followed by my personal encounter with this work, which sits as the ending 'Coda' to the musical contribution woven into this dissertation. *Human Mask* is situated in the Fukushima Exclusion Zone, from which 300,000 people were evacuated and 1,600 killed in 2011 as a result of the explosion and meltdown of three nuclear reactors in the wake of a tsunami. Filmed on a drone, the camera shakily moves its viewer through this scene of desolation. The camera enters into one of the dilapidated buildings, where it encounters what at first glance appears to be a young girl.

[587] Pierre Huyghe, *(Untitled) Human Mask,* 2014, video, 19 mins.

However, as the camera angle shifts to reveal this figure's face, we learn that it is in fact a monkey dressed in a waitress outfit wearing a Japanese Noh mask.[588]

Huyghe explains that *Human Mask* was made in response to a video clip that circulated on *YouTube* called 'Fukuchan Monkey in wig, mask, works Restaurant!'[589] This film, most probably made with on a Smartphone, shows a macaque called Fuku-chan dressed in a child's costume, wearing a wig and mask, serving customers in a restaurant in Japan. Fuku-chan was one of two macaques working in this restaurant – the other Yat-chan – who were both issued work permits by local authorities and paid by the owner in soybeans.[590] For *Human Mask,* Huyghe filmed Fuku-chan in her own empty restaurant, which he then repositions onto the abandoned set of Fukushima. Reality and fiction coalesce in this artwork which eerily considers the boundaries between humans and animals.

As in *Untilled* and other examples of Huyghe's works, this human/animal hybrid hints at the closeness of humanity to animality (and vice versa). And now, the tragedy of human mistreatment of animals comes to the fore. Anuradha Vikram writing for *Hyperallergic* points out the "civilising agenda" of this mask positioned on an animal. For Vikram, the mask's Japanese origins hint at racialised pasts of Orientalism and the suffering of all nonhumans as well as non-white and non-male humans in the hands of white supremacist, patriarchal culture.[591] This monkey, like so many more, is othered yet her performance remains uncannily human-like. Laurel McLaughlin finds that this macaque acts "too human" for the viewer's comfort.[592] "Nature is cultured and culture is natured" in a confusing hybrid that at once elevates the monkey to the "highest form" of the human whilst simultaneously "primitively" masquerading as a human.[593] Imitation might be the highest form of flattery, but in this instance, partial identification leads to the eruption of guilt and unease in the human viewer. McLaughlin argues how we are able to identify our own self and our ancestral

[588] Huyghe in fact designed this mask himself and it was cast out of resin. Traditional Japanese Noh theatre relies on a "neutral" masking of the face, "proffering agency to its audience through the veiling of the actors' facial expressions." Laurel McLaughlin argues that whilst "the protagonist wears the mask as a means to hide his emotions" the audience is allowed "to project their own emotions upon the mask. In doing so the audience interprets the play through a conspicuous subjective lens, in addition to the objective lens generated by the play itself." McLaughlin continues, "[w]hile the viewer introspectively interacts, so does the actor, as he draws closer to his own interior self, not only on a performative level but on a spiritual one as well." The mask therefore "functions as a double-sided mirror for both audience and actor." Laurel McLaughlin, 'Pierre Huyghe *Untitled (Human Mask)*: The Other in the Open' in *Antennae,* 42, (Winter 2017), pp.22-36, p.25.
[589] 'Fukuchan Monkey in wig, mask, works Restaurant!' on *YouTube,* available: https://www.youtube.com/watch?v=zS7QkjIKOxk, [accessed 23 October 2019].
[590] Jennifer Higgie, 'One Take: Human Mask' in *Frieze,* (17/12/14), available: https://frieze.com/article/one-take-human-mask, [accessed 30 October 2019].
'Nature' here is well and truly incorporated into capitalist human culture.
[591] Anuradha Vikram, 'Art with a Dose of Imperialism: Pierre Huyghe at LACMA' in *Hyperallergic,* (10/02/15), available: https://hyperallergic.com/181315/art-with-a-dose-of-imperialism-pierre-huyghe-at-lacma/, [accessed 30 October 2019].
[592] McLaughlin, p.23.
[593] *Ibid.*, p.25.

past in this repulsive other breaking the subjective/objective boundary. She/he uncannily reminds us that maybe we cannot really know our own true self.[594]

The effect of *Human Mask,* like that of *Uumwelt,* is to open up Warner's "shared zone of anxiety." The macaque functions as an "ever-recurrent projection of a paradoxical anxiety-ridden future and the vestigial desire to know the 'self.'"[595] This monkey reinforces repressed fears that something inherently "unhomely" resides at the core of being itself.[596] In *Human Mask,* the only access humans have to this radically other world is through the eye of the drone, a technological prosthesis, enabling them to "optically understand or capture the landscape."[597] Huyghe provides a voyeuristic window into the disaster that is Fukushima, the remnants of humanity's past reminders of our ruinous behaviour. Yet this all-seeing view from nowhere encounters a scene where nothing makes sense and human selfhood is threatened. The lack of narrative, with no resolution and the loop play of the video, mirrors the macaque's fate and "forces the viewer to *experience* the video" writes McLaughlin.[598] Floating above this scene, the human viewer almost becomes part of the ongoings, grasping for meaning as time, identity, reality, fiction and inside and outside all become confused.[599] The viewer cannot be certain of the timeframe of this film, the macaque's aimless actions perhaps lasting for days. Her "quick almost random movements, shatter linear time to encapsulate the viewer in the act of waiting for something to happen."[600] Yet it never does. We watch in a state of suspension, mesmerised by her peculiar movements.

Mirror neurons, those which "make one imitate or feel the expressions seen on another" were first discovered in macaques. Kari Weil explains how "we activate neural representations of motor actions in our brain similar to the ones we perceive or expect in the other."[601] This performed unconsciously, posits empathy not as a conscious *attribute* we choose to express but rather as a nonconscious cognitive capacity or process we share with a wide variety of nonhuman life, as suggested by Hayles. As we witness this monkey's suffering in the hands of capitalist infrastructure, the empathy provoked pushes us to consider the bigger picture of this scenario. Yet perhaps all we allow ourselves to experience is apathy? The aestheticization of this monkey's situation allows a critical distance from which we can observe her behaviour through familiar frames – the drone, the costume, the human setting and her human-like movements. These frames might manage to dilute

[594] *Ibid.*, p.26.
[595] Warner, 'Vacant Possession', p.133.
[596] McLaughlin., p.29.
[597] *Ibid.*, p.30.
[598] *Ibid.*, p.22.
[599] The forest curtains inside the restaurant creates "a space within a space" casting a "doubled" effect upon this interior to disorient the viewer. *Ibid.*, p.33.
[600] *Ibid.*
[601] Kari Weil, 'Empathy' in Turner *et. al.* pp. 126-139, p.127.

the tragedy of this story and leave us merely indifferent. Animals too, as far as we know, are indifferent to both art and cameras.[602] The macaque in this film does not perform for the camera. She remains indifferent to it and to the viewer's gaze. She would also have no interest in knowing her movements were made into an artwork. And through the placement of the mask on her face, the viewer's gaze can be met only with indifference. We cannot quite see her eyes, those most crucial stimuli for empathic identification.

Yet I argue that somehow Huyghe's film bypasses this barrier. Through its de-*monstration* of this haunting and haunted monkey, *Human Mask* generates a series of pre-discursive and prelinguistic affects that cannot be explained by rationality. Viewers are encouraged to empathise across the most radical of differences – the uncanniness of her form and the tragedy of her situation provoking visceral emotions, even if these cannot be fully explained. Once more the artist points to meanings outside of human knowledge structures, suggesting humans cannot see, name or know everything in the world. In her toxic habitat, this macaque embodies what Ron Broglio describes as "the return of a disaster many seek to repress."[603]

Broglio writes about the phenomenal and alarming return of wild boars (and other rare wildlife) to the site of the Chernobyl nuclear fallout in 1986. In his paper 'The Creatures that Remember Chernobyl' Broglio argues how the flourishing of life in human absence offers a chilling reminder that humans will never repress their deepest, darkest pasts. His ideas might also be applied to this solitary figure, a ghost who continues to haunt the desolate Fukushima. Huyghe's macaque reminds us of our evolutionary past when we emerged out of life as monkeys into the beings that we are today, as well as our more recent noxious and destructive capitalism. She, like Broglio's boars, "carr[ies] the past along with [her]" reminding her viewers of her own "invisible toxicity." Despite our desperate efforts to elevate and segregate ourselves from the animal world, human vulnerability to our own repressed animality remains – in constant threat of eruption. In our current climate of environmental decimation and mass extinction, our atrocities are becoming increasingly unavoidable, and no one can predict what is going to happen. The world is becoming hostile to our alienating/ed presence: we distance ourselves from the natural world and so it turns its back on us. A hospitable move towards other life (or theirs towards us) must be extended. Humans have nowhere to turn to avoid the gaze of our animal others, and rather it seems pertinent to accept "the repressed detritus" of our anthropocentric past and incorporate it into our idea of

[602] Higgie.

[603] Ron Broglio, 'The Creatures that Remember Chernobyl', *The Atlantic,* (April 26, 2016), available: https://www.theatlantic.com/science/archive/2016/04/the-creatures-that-remember-chernobyl/479652/, [accessed 30 October 2019].

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human life, rather than arrogantly and naively believing our animal past, present and future "remains safely buried."[604]

I have argued that Huyghe's works are spaces of relationality. Human viewers are placed in temporary coexistence with the nonhuman entities included in the individual artworks. These become Donna Haraway's contact zones, spaces that make palpable the conditions for multispecies living. Encounters and relationships with otherness across differences occur in both hostility and harmony. Different modes of intelligence and expressions of what N. Katherine Hayles names unthought emerge and interact. Meaning can no longer be reserved to humans. We are at once reminded of the limits of our thinking and our abilities to change how we think of, relate to, and exist in the world. In so doing, I suggest these encounters fertilise the grounds for possible extensions of hospitality from humans to nonhumans and vice versa. New limits could be envisaged and what had seemed impossible made possible. Perhaps new forms of kinship and empathy might be cultivated when we move out of the fictions of Huyghe's practice back to the reality of our increasingly precarious situation.

[604] *Ibid.* See also Haraway 'Tentacular Thinking' where she argues that the *Chthulucene* must collect up the trash of the Anthropocene.

Coda: Hospitality for an Other

Figure 66: Pierre Huyghe, *Untitled (Human Mask),* (2014). Film, colour, stereo, sound, 2:66. Running time: 19 minutes. Courtesy the artist; Marian Goodman Gallery, New York; Hauser & Wirth, London; Esther Schipper, Berlin and Anna Lena Films, Paris. © VG Bild-Kunst, Bonn, 2019. Film still © Pierre Huyghe

Figure 67: Pierre Huyghe, *Untitled (Human Mask),* (2014). Film, colour, stereo, sound, 2:66. Running time: 19 minutes. Courtesy the artist; Marian Goodman Gallery, New York; Hauser & Wirth, London; Esther Schipper, Berlin and Anna Lena Films, Paris. © VG Bild-Kunst, Bonn, 2019. Film still © Pierre Huyghe.

A drone navigates us towards a desolate scene of destruction. The loud noise of a car engine is abruptly replaced by an eerie quiet as we move through the deserted site. A Japanese newsreader warning of an approaching disaster is heard on a tinny radio announcement. This is the only sign of human life straining from the distance. In this unsettling absence of human presence, all that is left are the remnants of our inhabitation in the wake of the damage caused by our own habits. Identified as the town of Fukushima, this is a scene ravaged by a violent succession of natural and technical disasters, all provoked at bottom by humankind and our addiction to capitalist progress. Within this eerie landscape of ruins and disappearance, questions of agency prevail.

Pierre Huyghe's video *Untitled (Human Mask)* is firmly located in our current moment that is sometimes called "the Anthropocene". Naming the geological epoch we are now said to inhabit – one in which *Anthropos* has acquired a geological agency, dangerously altering the earth's

atmospheric composition – the Anthropocene announces the slow yet inevitable collapse of the future through perpetual crisis and ecological failure on a planetary scale. This video's opening presents a real-life scene where the catastrophe has already happened.[605] Inserting his viewers into a future without them, making them visualise the consequences of their actions, Huyghe provokes humankind to think its own undoing. How might the world move forward without us in it one asks?

The camera passes through the ruins of Fukushima to enter an abandoned, partially destroyed building. Strangely lit in artificial blue light, one lone figure occupies this space. Her appearance is revealed fragmentarily, first the crown of her dark-haired head, a glimpse of her porcelain profile, and then a full-length shot of her outfit from behind. As the camera moves around and pans back, the sound of her restricted breathing becomes audible. Her face is revealed to be concealed beneath a mask, denying this creature entrance into Emmanuel Levinas's ethical circuit. Levinas named the face the feature that enables one being to respond to an/the other. Animals traditionally refused this capacity, Huyghe goes a step further in confining his creation within a mask. The rigid mould of this facade floats like a spectre. It seems disembodied from the primate's body that slowly comes into focus, with its hairy arms and knees and long-clawed fingers. This grotesque, hybrid figure at once horrifies and compels its viewer, laughable as much revolting, unthinkable in its very form. One cannot look away. This being is slowly recognised to be not a young girl, nor a fictional monstrosity, but a monkey dressed up in a costume. The long wig, navy blue dress, and Oriental Noh mask attribute the monkey chimerical qualities. It appears as an unsettling cross between human, animal and fabricated machine. But really the monkey is tragic victim to a cruel human joke at the animal's expense. Pure representation, the identity of this macaque – a species used widely for scientific testing due to the intricate social structures and brain features they share with humans – remains a mystery, overwhelmed by the roles projected onto it by humans.

Human Mask makes its viewers privy to the solitary life of this monkey, a tragic relic of human anthropocentrism, a lone survivor in the wreckage of human-wrought devastation. We watch this macaque pass his or her time (we are never assured of the monkey's gender) in self-grooming, restlessly gazing into space and roaming the restaurant in obvious boredom and agitation. They carry out their past hospitality duties with mechanical motions, removing food from the freezer to be served to customers no longer waiting. One is filled with sadness and pity not quite explicable. Why does it not leave one asks? This is but one of the mysteries that compel us to keep on watching. On the other hand, it is the monkey's imprisonment within a performance of prescribed, iterated functions that appears most tragic. It is perhaps this self-captivity that pushes any condemnation we

[605] I appropriate this phrase from Timothy Morton, *Ecology without Nature,* (Cambridge Ma.: Harvard University Press, 2007).

Figure 68: Pierre Huyghe, *Untitled (Human Mask),* (2014). Film, colour, stereo, sound, 2:66. Running time: 19 minutes. Courtesy the artist; Marian Goodman Gallery, New York; Hauser & Wirth, London; Esther Schipper, Berlin and Anna Lena Films, Paris. © VG Bild-Kunst, Bonn, 2019. Film still © Pierre Huyghe.

Figure 69: Pierre Huyghe, *Untitled (Human Mask),* (2014). Film, colour, stereo, sound, 2:66. Running time: 19 minutes. Courtesy the artist; Marian Goodman Gallery, New York; Hauser & Wirth, London; Esther Schipper, Berlin and Anna Lena Films, Paris. © VG Bild-Kunst, Bonn, 2019. Film still © Pierre Huyghe.

might feel for Huyghe the artist, or the monkey's previous owners in their exploitation of this animal for their own profit, to the backs of our minds.

The immobile mask conceals any flicker of emotion on the monkey's face, but even if it didn't, I wouldn't be able to understand what this animal might communicate. Trapped inside a self-gratifying human representation, Huyghe's monkey forms an uncanny reminder of similarities we humans share with our primate kin. It is precisely these similarities its original restaurant audience would have relished. Surely our entertainment in watching animals perform derives from imagining that they do in fact suffer. We can always see that they are thinking and that they are feeling, yet we just don't know what or how, and it is precisely this inability to know and thus control that sits so uneasily with us.

In light of this uncomfortable truth, civilised humankind has always tried to live in distinction from the animal kingdom. Our shared ancestry has been subject to an increasingly violent repression, particularly since Charles Darwin's theories of evolution emerged with his 1859

publication *On the Origin of Species.* Darwin's proof of the inextricable proximity between humans and animals through their shared genetic history coincided with the Industrial Revolution and its rapid expansion of agriculture, industry and their inextricable partner in crime, capitalism. This moment would see a greater distancing of animals from everyday life. As the scientific and ecological evidence has mounted to suggest our dependence upon and shared affinity with animal alterity, humanity has gone to greater and greater lengths to segregate itself from those it calls other. With populations booming and urban sprawl spreading, increasing numbers of animals are being made extinct through loss of habitat and food sources as well as changes in climate and newly developed diseases caused by poisonous toxins. Human contact with the natural world is becoming severely limited whilst simultaneously people are consuming more and more animals as part of their daily diet. The external animal we frantically ingest contradictorily stands for the internal animal we ruthlessly repress. Plato's notion of *pharmakos* – the scapegoat – springs to mind, animals being both sacrificed *for* and constitutive *of* humanity. This very ambiguity makes them the most threatening.

The monkey's awkward gait, its limbs falling a bit too long for its body, and its costume ill-fitting unsettles the scene further. Something is just not quite right. Mark Fisher writes how "the weird" with its implicit sense of *wrongness,* makes us feel that it should not exist, or at least not *here*.[606] Yet it *is* here, invalidating previously demarcated categories. Boundaries blur like in Haraway's cyborg. Her non-objective feminism is brought to life in Huyghe's film, located in a restaurant, a space normally reserved for human sociability, but here appropriated by a curious hybrid product of our time. We are uncomfortably reminded of our shared affinity with nonhuman life, a fact we often push from conscious thought.

Freudian psychoanalysis outlines repression to be a major form of ego-defence whereby threatening or unpleasant experiences are "forgotten", forcing thoughts into the unconscious.[607] These internal, psychological battles are provoked by the experience of anxiety when the consolidation of the self is threatened with disintegration and annihilation. The human ego is in a constant battle –- with both internal and external threats – to maintain its (illusory) sense of completeness and self-containment. Freud's narrative suggests that an attempted rejection of humanity's own animality created the unconscious; animality is not something that naively pre-existed organic repression but is something that retrospectively emerges as a result of this process.

In his 2003 book *Animal Rites,* Cary Wolfe states:

[606] Mark Fisher, *The Weird and the Eerie,* (London: Repeater Books, 2016), p.10.
[607] Sigmund Freud, *Five Lectures on Psycho-Analysis,* trans. by James Strachey (London: Penguin Books, 1995) pp.28–9.

> [T]he human being, who becomes human only through an act of 'organic repression', has to *already* know, *before* it is human, that the organic is repulsive and needs to be repressed. And so, Freud's 'human' is caught in a chain of infinite supplementarity, as Jacques Derrida would put it, that can never come to rest at an origin forming a break with animality. This means, of course, that the figure of the human in Freud, despite itself, is constituted by difference at the origin.[608]

Wolfe argues that the 'phantasmic' human identity we like to believe we possess is in constant battle with our 'animalistic' or 'primitive' determinations inherited from our evolutionary past, determinations that can never be successfully overcome no matter how strong the repressive forces. We have never been individuated subjects; differences will forever lie at our origin. The desire to return to the illusion of an absolute self drives our constant battles against the other. But the human subject can only ever be identifiable in contrast to an other, a difference that precedes any self-identification. Humanity is ironically fated to dependence upon animality whilst simultaneously resolving to sacrifice the animal within and without.

Freud's theory of the uncanny is a crisis of the proper, the homely, the familiar and the natural.[609] It is not simply an experience of strangeness or alienation, but a commingling of the familiar with the unfamiliar. A return of the repressed, the uncanny erupts when a figure from our disowned past comes back to haunt us with a vengeance. Huyghe's video of this monkey dressed up as a human, a monkey whose motions don't seem so unfamiliar from our own – hobbling around like an elderly lady, spinning in circles like a young child at play – acts as an uncanny representation of our ancestral past resurrected. The monkey's self-attentive behaviour, fondling its hair and picking at its claws, caricatures the selfish and narcissistic human condition. Meanwhile, its mechanical leg tapping, parodied in the Japanese waving cat – a figurine ironically supposed to bring its owner good luck – lend the monkey additional dimensions of an automaton. This one simian figure embodies the condition of the human in the Anthropocene, a phantasmic conglomeration of organic and mechanic, entrapped in a role of artificial, mundane and repetitive labour, living in ruins crumbling around us as we continue our incessant drive for progress.

The unsettling figure of the artificial-human-animal hybrid sees a collapse of certain distinctions humans firmly set in place to distinguish themselves from the radical Other. The human-chimp split occurring six million years ago, it is an undeniable truth that primate genes reside within

[608] Cary Wolfe, *Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory,* (University of Chicago Press, 2003), p.3.
[609] Freud, *The Uncanny*.

us and ours in them. The monkey embodies Levinas's collapse of the figure of host, guest and hostage, when he plays upon the double meaning of the French term *hôte* as both "the one who hosts" and "the one who is hosted."[610] Derrida's law of hospitality – the regulation of an economy of one's own, of one's property, of what is proper – advances Levinas's thought on hosts and those being hosted into a phallogocentric hostage scenario. Exploring the reciprocal debt incurred when an other enters into one's home, Derrida's text identifies the implicit sexism and racism inscribed within this law.[611]

Huyghe's video tells the story of a macaque who was once host to the human guests of this Japanese restaurant, and hosted, or held hostage by its human owners. And not enough to imprison it within their home, the monkey's masters went a step further in concealing it beneath a costume and mask, perhaps as a cruel reminder that the monkey will never reach the transcendent status of humankind (as if it would even want to). Denied a face, and thus expressivity, it is incapable of any sort of response on both sides. Yet the audible rasping breath, animating an otherwise inorganic form, acts as a constant reminder of the sacrificial intent of this hostage scenario.

On the other hand, the repressed animal within the human subject is at once hosted by and host to the human who is held hostage to this internal manifestation of alterity. In Huyghe's video we see an eruption of this alterity into view, into conscious thought, into a world where human life has been eliminated, possibly even overcome by such alterity. As distinctions between host, hostage and parasite are blurred, Haraway's symbiotic hopes that all species become-with one another come forth.[612] Might Huyghe's video spark visions of a more fluid future where boundary distinctions blur and commingle, easing the weight of difference we currently maintain?

Huyghe's message remains deliberately ambiguous. Adapting the real story of Fuku-Chan, and using Fuku-Chan herself in this video, Huyghe creates an embellished fiction that condenses imaginary and material reality. The monkey itself embodies this ambiguity. And now left alone, imprisoned within a household devoid of human occupation, this monkey's fate might seem doomed to a life of eternal repetition. However, the maggots festering in the kitchen indicate a new ecology spawning in the ruins of this disaster; perhaps there could be a future beyond this monkey's frustrations? A future without us? Huyghe's lack of clear narrative and determinations leaves this video open to interpretation by his viewers.

Slavoj Žižek claims a consensus seems to have been reached "that we cannot deal with animality as such, but only with the human construct of" it. The animal cannot but be represented,

[610] See Jacques Derrida, *Adieu to Emmanuel Levinas,* trans. by Pascale-Anne Brault and Michael Naess, (Stanford: Stanford University Press, 1999).
[611] See Derrida 'Hostipitality'.
[612] Haraway, *Species,* p.3.

Figure 70: Pierre Huyghe, *Untitled (Human Mask),* (2014). Film, colour, stereo, sound, 2:66. Running time: 19 minutes. Courtesy the artist; Marian Goodman Gallery, New York; Hauser & Wirth, London; Esther Schipper, Berlin and Anna Lena Films, Paris. © VG Bild-Kunst, Bonn, 2019. Film still © Pierre Huyghe.

Figure 71: Pierre Huyghe, *Untitled (Human Mask),* (2014). Film, colour, stereo, sound, 2:66. Running time: 19 minutes. Courtesy the artist; Marian Goodman Gallery, New York; Hauser & Wirth, London; Esther Schipper, Berlin and Anna Lena Films, Paris. © VG Bild-Kunst, Bonn, 2019. Film still © Pierre Huyghe.

he argues, which means that it is only ever conceived as a representation, giving us an "external" idea of what an animal is as an "object", or as a representative "which comprises the figuration of its 'interest' as a subject."[613] This monkey is at once an aesthetic representation within a work of art, a representation of itself as our idea of what a monkey might be, a representation created by humans as a form of control as it masquerades as a human and a representative of the human anthropocentric condition. Fisher states "we could go as far as to say that it is the human condition to be grotesque, since the human animal is the one that does not fit in, the freak of nature who has no place in the natural order and is capable of re-combining nature's products into hideous new forms."[614] Our violent need to re-present other life, rather than recognise the validity of subjectivities other than our own is made manifest in this video. The monkey is never a subject in

[613] Slavoj Žižek, 'Foreword', in Oxana Timofeeva, *History of Animals: An Essay on Negativity, Immanence and Freedom,* (Maastricht: Jan van Eyck Academie, 2012), pp.6-12, p.9.
[614] Fisher, p.35.

itself, but merely a means serving human ends. This animal is only ever seen in distinction *from* humanity, so as to ground said humanity with a more rigid foundation. This monkey's uncanny costume both increases and decreases its difference to the human, troubling any notions of a definitively fixed human or animal identity.

'The animal' is everything that 'the human' is not, or rather; the animal is not everything that the human is. Animals apparently 'lack' all of the intrinsic qualities that we use to define ourselves as human – such as thought, speech, self-awareness, the ability to respond, or an awareness of death. In *The Animal that Therefore I Am,* Derrida seeks to overthrow these privations, cultivating the edges of limits and expanding rather than repressing differences through his practice of limitrophy.[615] Derrida identifies our naming 'the animal' as the original act of violence, homogenising a heterogeneous multiplicity of individuals and differences beneath one term. In his seminar, Derrida recounts an encounter with his cat, whilst naked in his bathroom, and his subsequent experience of shame beneath her look. Derrida loses his sense of self and his sense of his cat in this moment.

> [T]he gaze called 'animal' offers to my sight the abyssal limit of the human: the inhuman or the ahuman, the ends of man, that is to say, the bordercrossing from which vantage man dares to announce himself to himself, thereby calling himself by the name that he believes he gives himself.[616]

Derrida does not seek to overthrow the limits between humans and nonhumans but rather to accept the limitations of humans, recognising the abyssal unthinkability of nonhuman others and accepting their differences and distance from us with humility. Derrida comes to himself and arrives at self-consciousness only in and through an animal other, which leaves a trace of the shock of the encounter within him. It is how Derrida chooses to respond to that trace which is crucial – but he cannot disavow its effects. As the gaze of Derrida's cat compels him to address the vulnerabilities we share as mortal beings, perhaps this encounter can be recreated in artworks where humans are placed in direct, eye-locking contact with their animal counterparts? Huyghe's closing shot of the monkey's eyes, flickering beneath its inert mask, animates this vision with a life force previously denied. This last encounter, a brief moment of contact for the viewer with the soul of this animal could endure and provide impetus for future compassion.

[615] Derrida, *The Animal,* pp.30-32. His expansion of limits can be compared to the equalisation of all life argued for by new Materialist thinking and Object-Oriented Ontology.
[616] *Ibid.,* p.12.

Derrida's law of hospitality places its emphasis on reciprocity. In *Aporias* he reminds his readers how identity "can only affirm itself as identity to itself by opening itself up to the hospitality of a difference from itself or of a difference with itself."[617] Self-identity depends upon what differs from it, and Derrida emphasises our need to develop an ethics that addresses *l'arrivant,* this being the absolutely unexpectable arrival. He closes *Of Hospitality* musing "isn't what is peculiar to humans [in contrast to other species] instead their being able to be hospitable to animals, plants […] and the gods?"[618] The spectral, uncanny and haunting figure of Huyghe's monkey was a host, offering hospitality to a species other than its own, and now condemned to a life waiting for customers and masters who might never return. But for the time being, that does not seem to bother this monkey, who diligently, and with dignity, continues their duties apparently indefinitely, in case a new guest does arrive. Might it not exemplify Derrida's model for a radical openness and infinity of possibilities within the law of hospitality, one that does not discriminate against otherness? We must open ourselves up to this host – be that animal or automaton – as well as offering a reciprocal hospitality back to them. Taken on a journey through an example of capitalist ruins, viewers to Huyghe's art are then made witness to an unimaginable, uncannily familiar fiction of future possibilities, uncanny precisely because we are not actually there.[619] It is here that art's power lies: to speak the unspeakable, to make us think the unthinkable, to tell stories of future alternatives with new forces of agency that might be able to continue in the wake of a catastrophe that has already happened.

Figure 72: Pierre Huyghe, *Untitled (Human Mask),* (2014). Film, colour, stereo, sound, 2:66. Running time: 19 minutes. Courtesy the artist; Marian Goodman Gallery, New York; Hauser & Wirth, London; Esther Schipper, Berlin and Anna Lena Films, Paris. © VG Bild-Kunst, Bonn, 2019. Film still © Pierre Huyghe.

[617] Jacques Derrida, *Aporias,* trans. by Thomas Dutoit, (Stanford: Stanford University Press, 1993), p.10.
[618] Derrida and Dufourmantelle, p.142.
[619] See Anna Lowenhaupt Tsing's wonderful book *The Mushroom at the End* for an exploration of the possibility of emerging life in capitalist ruins. (Princeton: Princeton University Press, 2015).

Chapter 5. Deconstructing Logocentrism: Parrot Echoes

Sounds in Relation

In this final chapter, I continue my deconstruction of the human capacity language, as a marker of distinction against the animal world. I explore the problem that the words we apply to the animal world fail to encompass animal being, alienating us from both them and the world that we share. In light of limitations language presents us with, it seems we need to find a new way of relating to nonhumans. I explore the capacities of art, science, technology and fiction to create a space from which a human-animal response might elicit. Once we are aware of our hybrid state of coexistence with other life (human and non, living and not), maybe then the respect demanded might become audible.

I focus on Allora and Calzadilla's *The Great Silence* (2014). This is an immersive installation combining footage from both the Rio Abajo rainforest in Vieques, Puerto Rico, and the Arecibo Observatory, one of the world's largest single-aperture telescopes. The three-channel film plunges its viewers into the dissonant sounds of these natural and technological worlds, so powerful that they might even be felt, whilst a subtitled script runs across the screen acting as a voice for an *Amazona vittata* parrot living in the forest. I read this work alongside theory and science to probe important questions about the validity of nonhuman voices, the boundaries separating humanity from animality and technology, the "non-innocence" of thought and words and how humans might come to mourn the losses of the thousands of species currently disappearing from the world.[620]

My key references are Jacques Derrida who writes on the "phonologocentric" tradition that falsely locates originary (human) meaning and self-presence in the word in *Of Grammatology* (amongst other texts).[621] Derrida later extends his thought specifically to the violence inherent to the very name 'the animal' in *The Animal That Therefore I Am*.[622] Donna Haraway's cyborg feminism argues for a chimerical understanding of bodies, erupting the boundaries between nature, culture and technology, and opening up the possibility for new figurations, assemblages and narratives.[623] Jakob von Uexküll's theories on the meaning-making abilities of nonhuman organisms have facilitated the emergence of biosemiotics, a mode of science which finds processes of signs and signification – that humans cannot read – across the natural world. As the animal-human binary is increasingly eroded by these modes of thinking, consideration of what animals might be able to

[620] Haraway, *Simians,* p.18.
[621] Derrida, *Of Grammatology.*
[622] Derrida, *The Animal.*
[623] Haraway, *Simians.*

express if they are judged on their own terms, what they might say if we asked questions proper to them rather than ourselves, becomes possible.

Lynn Turner's writings on cetaceans and the importance of their songs – that resound and vibrate across our oceans[624] – as well as Vinciane Despret's argument for the self-expression of voice amongst song birds, emphasise the relationship the sounds we make have to the space and bodies around us.[625] Sound, song and voice are relational attributes which cannot be denied the animal kingdom. In this chapter I argue that the human capacity for language must no longer be used to define us above and against animals. Rather, it is the capacity for communication that we share with others that must be acknowledged and allowed to cultivate relationships *with* them. Humans must learn to respond to animal voices resounding across the Earth and I suggest that Allora and Calzadilla's film provides an ear for us to listen with.

Allora and Calzadilla

Jennifer Allora (b.1974) and Guillermo Calzadilla (b.1971) are an artist duo whose practice heavily engages with the social realities of colonialism, militarism, ecology and self-determination. They live and work in Vieques, an island off mainland Puerto Rico which was appropriated by the United States Military as a bomb and missile range in the 1940s (occupied until 2003). For the past two decades, the artists have recorded the history of the island through various projects, including *Land Mark* (2001-2) which investigates the imprints left by colonial and military violence through a collective exploration of expropriated land.[626] Land purportedly rented by the military is now degraded and defaced and this series of photographs records the artists' stamps of protest on the reclaimed land.[627]

[624] Lynn Turner, 'Voice' in Turner *et. al.,* pp.518-532.

[625] Vinciane Despret, keynote speaker at *"ON AIR live with…" Arachnosophy,* related to Tomás Saraceno's exhibition *On Air* at Palais de Tokyo, Paris, France (14/12/18).

[626] *Land Mark* frames Vieques as a "transitional geography" positioned precariously between social and ecological wounds of the occupation on the one side and a future-oriented-project of survival, remediation and sustainable development on the other. *Gloria: Allora & Calzadilla,* ed. by Lisa D. Freiman, Carrie Lambert-Beatty and Yates McKee, (Indianapolis: Indianapolis Museum of Art, 2011), Exhibition Catalogue, p.66.

[627] The artists have documented Vieques' abuse as a firing range (923,000 bombs and missiles were fired in 1998 alone); the islanders' (numbering 9,400 in 2002) resistance and success in getting the bombing finally stopped in 2003; their assertion of representation and the ongoing discussions and conflict between islanders and the U.S. government. Allora and Calzadilla's work takes form as "a kind of case study." Jennifer Allora and Guillermo Calzadilla in Mark Gisbourne, *Double Act: Two artists one expression,* (New York: Prestel, 2007), p.177. See also Michael Ellison, 'US to Halt Vieques Bombing , in 2003' in *The Guardian,* (15/06/01), available: https://www.theguardian.com/world/2001/jun/15/usa.michaelellison, [accessed 23 October 2019].
The Vieques islanders protested the military's attempts to have the island completely depopulated and were eventually successful in completely stopping the bombing in 2003.

Puerto Rico lacks statehood, legislative representation in Congress, and the right of its residents to vote for President. It is a "second class supplement to the United States, an additional member that does not quite belong but has played a constitutive, economic and geopolitical role for the U.S. for more than a century."[628] Victim to ruthless colonisation, and ongoing marginalisation, Puerto Ricans are homogenised into one deprived colony of lower-class citizens, who nevertheless play a crucial part in the establishment of Western supremacy. They become sacrificial yet integral components to another identity. The small island of Vieques is by turn on the edges of an already marginalised territory. Lying at the forefront of global warming, climate change "haunts the environment of the landscape" leaving the island's terrain historically marked.[629] When it was seized for military use in the 1940s, Vieques's inhabitants, human and non, were sacrificed for the United States and Western world. With fossil fuel capitalism inextricably bound up with the military footprint of the U.S., this sacrifice is amplified, island inhabitants forced to pay the price of military activity well beyond its occupation of their territory.[630] Threatened with hurricanes and rising sea levels as a direct result of climate change, who can predict what the future holds for this "51st state".[631] Entangled inside this narrative are both human and nonhuman players, and we see an application of both natural and technological tools in the service of humanity as a whole. The inhabitants of Vieques, being both sacrificed *for* and constitutive *of* humanity, occupy a different narrative to the White Western colonial stories with which we are most comfortable.

Since the 1960s, the hamlet Esperanza (Hope) on Vieques has been home to the Arecibo Observatory, one of the world's largest single aperture radio telescopes. Located deep in the heart of the luscious Rio Abajo rainforest, this technological tool protrudes out from the tree canopy. Arecibo was developed by humans in order to communicate with 'intelligent life' beyond planet Earth. In the history and landscape of Vieques, we witness the profusion of natural, militaristic and astrological times and spaces, the colonised with the colonisers, the nonhuman with the human and the living with the non-living. A site of entanglement and hybrid identity, Vieques takes on an almost

[628] *Gloria,* p.70.
[629] *Ibid.,* p.87.
[630] Since halting military intervention on Vieques, the United States Ministry of the Interior has turned the area into a "wildlife reserve" which has controversially been seen as "no more than a cover up for the sixty years of missile decontamination." According to Gisbourne "to date, little has been done concerning land restitution", p.178. The sacrifice the islanders originally made has not been restored nor rectified, and in fact what we observe is humanity positioning itself against others of its own kind who collapse and coalesce under the pressures it places on them. As climate change, mass extinction and sprawling populations ravage the natural world and its resources and inhabitants, humanity overlooks without seeing or doing anything, the humanitarian side of our identity fails to come into action.
[631] '51st State', *Wikipedia.org* (n.d.), available: https://en.wikipedia.org/wiki/51st_state, [accessed 21 January 2019].

cyborgian dimension. It becomes impossible to pinpoint any notion of stability or coherence – an identity in itself.

Allora and Calzadilla's recent film *The Great Silence* was installed at the Wellcome Collection's *Making Nature: How We See Animals* (December 2016 to May 2017). This exhibition explored the question of how animals and humans relate to one another, how animal depictions influence our response to nonhuman life, and exposed the hierarchies that humans impose upon the animal kingdom. The artists' three-channel video was the first encountered. Developed over many years, this is a complex film which incorporates fundamental questions about humanity, animality, technology and the universe, as well as language, biosemiotics, and translation. Set in Esperanza, it features footage of both the Arecibo Observatory and the critically endangered *Amazona vittata* parrots. The film's three screens juxtapose natural and technological realms whilst at the same time foregrounding their embeddedness in one another. The explorative sounds resounding from both worlds overlap to create an immersive space of cacophony and juxtaposition.

The artists collage animality, technology and humanity to create a film that reflects Vieques's own cyborgian identity. At the same time, they challenge beliefs about the separation of nature from culture. Throughout the film, the viewer reads a subtitled script apparently told from one parrot's perspective. This script acts as both a visual and verbal limit separating humans from animal species, seeming to offer the most direct route for humans to penetrate animal worlds – with their own words. Science fiction writer Ted Chiang worked closely with the artists in the production of the accompanying text. "In the spirit of the fable", say the artists, "the subtitled text would present the bird's point of view and observations on current day *Homo sapiens'* search for life forms outside this planet."[632] The parrot reflects on the paradox that as humans so eagerly extend their eyes and ears into space, parrots and the other intelligent species that they live with on Earth face extinction and the subsequent disappearance of their own languages, rituals and traditions.

Chiang's script acts as "a form of interspecies translation" between the parrot and her human readers and listeners.[633] Kari Weil writes that "translation in the form of reading and thinking the mute eloquence of those animals with whom we cohabit, is our impossible obligation; a necessary step towards rendering our freedom, and our empathy, just."[634] In agreement with Weil's remark, I acknowledge the impossibility of speaking for animals – translating their languages into our own – but at the same time it seems that animal advocacy is the only way humans are able to begin to empathise with other species at this time. We must come to recognise that their mutism is in fact a suggestion at the limits of our own capabilities at interspecies translation and instead come to

[632] Allora and Calzadilla, personal email communication with author, (12 April 2019).
[633] *Ibid.*
[634] Weil, p.136.

appreciate their ways of being despite the apparent barriers in place. Only by mapping our bodies and minds onto the experience of another does empathy become possible. Whilst the human experience remains so moulded by our own language, translating what we think other species are saying might paradoxically be the best effort we can make towards beginning to consider what they might have to say. Only in attempting the impossible obligation of translation can we begin to change our relationship to other species.

The *Amazona vittata* is the only extant parrot species endemic to the archipelago of Puerto Rico. It was known as *iguaca* by the indigenous Taino people, an onomatopoeic name that resembles the parrots' flight call.[635] Having only ever lived here, the significance of the parrots – their histories, their voices, their relationships to this place and their interconnections with other life – is obvious. Yet it is a significance that humanity readily overlooks to allow for the ruthless eviction of animals from their homes.[636] Listed as critically endangered by the World Conservation Union since 1994, there now remains only one tiny population of between 34 and 40 birds in the wild.[637] They have suffered a drastic loss of habitat since colonisation of Puerto Rico in the nineteenth century, with forest being cleared for agriculture and industrial development, alongside the introduction of new predators to the area – human and non.[638] Due to declining numbers and the challenges the birds have faced in reproducing successfully, conservation efforts have been in place since 1968. These have included protecting their habitat, controlling predators, parasites and competitors, and establishing captive breeding aviaries in surrounding forests made visible in Allora and Calzadilla's film (figure 70).[639] *The Great Silence* does not present these facts as the data we are

[635] The Taino hunted the parrot without much effect on its population, it has only been over the past 200 years with the effects of colonisation that the parrots have been placed at critical risk of extinction. 'Puerto Rican amazon', *Wikipedia.org* (n.d.), available:
https://en.wikipedia.org/wiki/Puerto_Rican_amazon, [accessed 26 April 2019].
In fact, what the parrot's onomatopoeic name suggests is the relationship held between the Tainos and the *iguacas* was one based on sound and voice.

[636] See Dooren, *Flight Ways* and Matthew Chrulew and Rick De Vos, 'Extinction' in Turner *et. al.,* pp.181-197.

[637] 'Puerto Rican Parrot', *U.S. Fish and Wildlife Service,* (n.d), available:
https://www.fws.gov/southeast/pubs/facts/PR_parrot_QA.pdf, [accessed 26 October 2019].

[638] Black rats and mongooses will both eat eggs and young chicks, farmers shoot the birds – seen as pests – to protect their crops and disruptions are caused by the flight of ultra-light aircraft from adjacent islands. Birds inhabiting the world's islands have been the hardest hit by the chance of extinction: "while 'only' 20% of the world's bird species are confined to islands, approximately 90% of the avian extinctions have occurred in recorded history have been those of island inhabitants." Dooren, p.6.
It was after all the Dodo, a bird confined to the islands of Mauritius who first drew humanity's attention to our capacity to totally eradicate a species.

[639] Terry Glavin describes species not expected to escape extinction without significant human intervention, such as captive breeding 'the living dead'" in his book *The Sixth Extinction,* p.25. The captive breeding aviaries visible remind us of the anthropocentric human belief that we really can control nature and create a wilderness of our own making through our ruthless intervention and often cruel methods of conservation. For further discussion of this see also Van Dooren's chapter on Whooping Cranes, 'Breeding Cranes: The Violent-Care of Captive Life' in *Flight Ways,* pp.86-122.

used to when reading or hearing about endangered species, but rather adopts aesthetic and fictional means to tell the parrots' story as well as suggesting a hope that something could be changed. Allora and Calzadilla call their human viewers to listen to one parrot's words.

Figure 73: Still from Allora and Calzadilla, *The Great Silence* (2014), courtesy the artists.

Language Trouble

> Up until the eighteenth century, language – which would become man's identifying characteristic par excellence – jumps across orders and classes, for it is suspected that even birds can talk. A witness as credible as John Locke refers to the story of Prince of Nassau's parrot – which was able to hold a conversation and respond to questions 'like a reasonable creature' – more or less as a certainty. And even the physical demarcation between man and the other species entailed zones of indifference in which it was not possible to assign certain identities. […] the boundaries of the human were still threatened not only by real animals but also by creatures from mythology.[640]

This quote from Giorgio Agamben's *The Open: Man and Animal* demonstrates two factors for consideration. First, the uncertain boundary separating animals and humans, one subject to constant doubt, revision and threat. Humanity has for centuries been distinguished in opposition to

[640] Agamben, pp.24-5.

animality, dependent upon the identification of certain privations of nonhumans to assign 'proper' nameable characteristics to humans. This binary relationship posits an objectified animal of lack to be dominated and appropriated by the human subject. But with scientific developments in evolutionary theory by Darwin and others in the nineteenth century, the establishment of rights for women, slaves, and other oppressed peoples, alongside increasing critical study of identity politics, typical demarcations of difference are increasingly unfounded, shaking 'the human' identity.

Secondly, Agamben draws our attention to the fact that language – as an exceptional capacity of humans in contrast to animal sounds, voices, and mimicry – is only a recent assertion and can also be easily troubled. The Prince of Nassau's parrot uncannily makes use of human language responding like "'a reasonable creature'". Agamben cites John Locke, a pioneer of animal rights who advocated for nonhuman sensibility as well as being one of the most influential Enlightenment thinkers – otherwise known as the Age of Reason (1685-1815). At this time, animals were denied the capacity for speech thus preventing their entrance into the human ethical circuit. Jean-Jacques Rousseau writes on "*la voix de la nature"* which is for him a passionate and passive animal voice, prior to and excluded from rational human speech.[641] Speech for Rousseau, and many others, enables communicative reason. Animals being without speech are silenced, never to be listened to on their own terms, and denied a human(e) response.

Agamben's quote provides a starting ground for discussion to address the contradictory status of animals. They are separated from the rational human realm as a result of tests for intelligence, creativity, self-expression, speech, response, deception, grief, sentience and even a face, based always on human terms.[642] Animals can therefore only be represented and spoken for through human interpretation. The Prince of Nassau's parrot responded to humans, in human language no less. But despite this, parrots with their vocal learning abilities have remained exiled to that homogeneous grouping of dumb animals, a second-class category of otherness without speech, rights or respect. Animals, only ever tested on human terms, are trapped in a vicious circle of negation, forever deprived of identities of their own. Instead of seeking to prove that animals cannot

[641] See Derrida, 'Part Two: Nature, Culture, Writing', in *Of Grammatology,* pp.105-344.

[642] *The Great Ape Project* is one institution who dedicates its time to guaranteeing chimpanzees, gorillas, orangutans and bonobos the basic [*human*] rights to life. Founded in 1994, the project created the 'World Declaration of Great Primates' which proposes 1. Right to life 2. Individual freedom and protection and 3. Prohibition of torture for all great apes. Although honourable in its intentions, it seems anthropocentric to attempt to assign rights designed by humans for their own kind to other species but at the same time, perhaps this type of advocation and mediation is the best effort we can make in our contemporary moment, especially when so many animals face extinction and severe suffering. See *Great Ape Project,* available: http://www.greatapeproject.uk/ (n.d.), [accessed 26 April 2019].

do what humans do, might it not be better to consider what they might say, think or feel, if we only asked the right questions?[643]

Why do Parrots Parrot?

Parrots share with humans the capacity for vocal learning, able "to make new sounds after [they]'ve heard them."[644] Advanced vocal learning is done through listening, imitation and practice, as well as by gleaning acoustic information for the development of one's own voice. It is "an ability that few possess" Jennifer Ackerman reminds her readers in *The Genius of Birds*.[645] Parrots generate curiosity, humour and flattery with this incredible skill, often kept as pets to entertain us with our own words. However, these birds are labelled mere imitators, never adept for language-learning nor with a capacity for thinking or speaking in their own right. For humans this mimcry does not classify as intelligence. Never mind the fact that we form vowels and consonants with our lips and tongue, "among the strongest muscles per inch in the human body." Ackermann explains that "with no lips and tongues not generally used for making sounds, it's a tall order for a bird to make the nuances of human speech. This may explain why only a handful have accomplished the skill." She points out that "parrots are unusual in that they use their tongues while calling and can manipulate them to articulate vowel sounds, talents that probably underlie their ability to mimic speech."[646] Parroting seems to be a skill, a complex mode of inter-species translation, that humans themselves have been unable to refine.

The story of "the African Grey Parrot Alex", famous for his cognitive abilities, was "one of the primary anchors of the text" for *The Great Silence.* Allora and Calzadilla "loved the parallels that this genuine scientific experiment whose goal was to study the cognitive and language abilities in birds had with [their] fictional film synopsis."[647] Alex was the research subject of American scientist Irene Pepperberg who "mastered the vocabulary of hundreds of English labels for objects, colours and shapes". He "had a knowledge of abstract concepts including a zero-like concept, and he could sound out words the way that a child does: 'N-U-T.'" Alex could not only mimic human sounds but

[643] Here I appropriate Vinciane Despret's title *What Would Animals Say if We Asked the Right Questions?*
[644] Jennifer Ackermann, *The Genius of Birds,* (London: Corsair, 2016) p.160.
[645] *Ibid.*, pp.174 and 161. Vocal learning has been demonstrated by parrots, hummingbirds, songbirds, bellbirds, a few marine mammals (such as dolphins and whales), bats and one primate – humans. Scientists, notably Charles Darwin, also note the remarkable similarities between song learning in birds and human speech, from the processes of imitation and practice "right down to the brain structures involved and the actions of specific genes." Songbirds like humans have been found to express "speech defects". Ackermann, pp.161 and 182.
[646] Ackermann, p.170. Lynn Turner writes on Derrida and his repositioning of articulation as the supplementary structure to speech in her chapter 'Voice', which I will explore later in this chapter.
[647] Allora and Calzadilla, personal email communication.

articulate complicated notions in a coherent manner. Pepperberg captured the world with the fascinating and astounding abilities of Alex that had never been seen or heard before. Ackermann remarks "until Alex, we thought we were alone in our use of words, or almost alone."[648] But for the parrot in *The Great Silence*, Alex's abilities are nothing new nor impressive.

Alex's comprehension of human vocabulary which allows him to "use [it] to talk back with cogency, intelligence and perhaps even feeling" violently shakes the anthropocentric belief that *logos* is unique to humanity.[649] Chiang's script alludes to the fact that the only reason Alex's communication was taken seriously by the human world, was because he seemed to understand *our* concepts. Animal studies scholar Aaron Moe "exposes the very human-centric focus on Alex's studies", on his '"*remarkably, humanlike vocalisations*.'" Moe points out that "only Alex's breakthroughs with human language were 'remarkable', which overshadows the protean impulse at work when a species undergoes semiotic innovation to shapeshift into any environing sounds."[650] Moe quotes an instance when "Alex combined 'berry' and 'banana' to say 'Banerry … I want banerry.' In that moment he invented his own word for 'apple' out of words he already knew, cherry and banana."[651] Alex "took existing patterns, collapsed them, and shapeshifted them into a new word: 'he … slowed production and sharpened elocution ('ban-*err-eee*'), much as trainers do when teaching a new label.'"[652] Alex adopts a human position here as a trainer, using language innovations as a chance to relate to, and share with an other. He shows a complex understanding of the human language, the humans in his lab and how best to relate to them using words. He manages to express himself and his desires through a creative and comprehensive reflection of his environment. He absorbs, collapses and exudes his surroundings, much like the octopus we met in chapter one. Alex the Parrot demonstrates a grasp, resourcefulness and poetics of *human* language that many of us might envy.

Ackermann implies the evolution of parroting to be rooted in relationship development amongst certain birds. A gregarious species like us, budgerigars, for example, are prone to pair bonding. The male birds show commitment to their mates "by drumming up a perfect imitation of her 'contact' call, the special call she uses to keep in touch with her partner as she flies, feeds and otherwise goes about her day." Pair-bonded budgerigars can "converge on the same contact call" after just a few days, "with the male managing a bona fide imitation of the female. Her call becomes his." Ackermann explains how "the female uses the accuracy of his imitation to judge his

[648] Ackermann, p.2.
[649] *Ibid.*, p.3.
[650] Aaron Moe (quoting Irene M. Pepperberg) 'Poetics' in Turner *et.al.,* pp. 397-412, p.407.
[651] Apples look like large cherries yet are white, like a banana on the inside. *Ibid.*
[652] *Ibid.*

commitment to courting her and his suitability as a mate."[653] Mimicry is a crucial tool used by social species to interact and relate to one another. The dismissive attitude of humans about this form of communication as mindless repetition, fails to acknowledge its importance in social development and kinship relations amongst animals.

The significance of imitation for attunement across genders within couples is made clear by Ackermann. This is a way for females to judge the fidelity of their mates thus leading to stability within the flock and tight-knitted bonds of affection for the rearing of kin. *Amazona vittata* too mate for life and form pairs by performing duets with one another to establish relationships. When parrots parrot our human words, they may in fact be demonstrating a desire for connection with us, expressing trust, affection and recognition that we are in some ways like them. The final words of *The Great Silence* repeat Alex's own last words before his death in 2007; "You be good. I love you."[654] This parrot at once resurrects a past moment and anticipates times to come when care, love and respect might be necessary across species lines. The parrot uses our own words to remind us of the need to both loosen the tethers of what it means to be human and to extend our most humane qualities to species we normally disavow.

Humanist Sacrifice

> Animals cannot have language and therefore they lack the world. The world they have is not a common world, not a common space, but their restricted environment, to which their body naturally conforms. They can never leave their living circle; they always bring it along with them. 'Language is the house of being. In its home man dwells.'[655]

Oxana Timofeeva outlines Martin Heidegger's anthropocentric conclusions in her book *The History of Animals: A Philosophy*. The final sentence, taken from his 'Letter on Humanism' (1947) asserts that in order "to be", one must have language, and only through this can one find one's home and dwelling place of "ek-sistence" within the world. Humans for Heidegger are "world-making" whereas animals remain "poor in world."[656] Unlike humans, animals do not think or speak to create a world outside of themselves – the world as such – but are restricted to a predefined environment. Lacking language, they lack the ability to exist, to imagine or to be present 'as such'.

[653] Ackermann, p.140.
[654] Allora and Calzadilla, *The Great Silence,* (2014), all further quotations taken from the film will be noted with "*TGS*".
[655] Oxana Timofeeva (quoting Martin Heidegger) in, *History of Animals,* p.123.
[656] Stones he names "worldless" in his 1929/30 lectures *The Fundamental Concepts of Metaphysics.*

Heidegger's philosophies were influenced by Jakob von Uexküll and his theories on animal *Umwelten* where animals are described to inhabit individual bubbles or life worlds. Heidegger radically reinterprets Uexküll's theories – which were intended to show the meaning-making abilities of nonhuman life "actively engaged in the creation of a significant environment" – to instead conclude that animals, contained within their individual life worlds, have no access to meaning-making and therefore the world *as such*.[657] Heidegger keeps animals distinct from and outside of the human realm by attributing them a certain lack or privation which paves the way for further lacks and privations. Because of language humans are able to mark themselves out as different from others, through their capacity for language and the capacities language provides them with, leaving animals trapped in a never-ending vicious circle, homogenised beneath the name 'animal'.

In *The Animal That Therefore I Am***,** Derrida challenges the violence of "corralling" a heterogeneous multiplicity of the living under the name "animal."[658] He traces preceding philosophical thought to demonstrate how the impoverished life of animal existence – one of sacrifice and based solely on lack – becomes an affirmation of our own distinctive privilege over 'animal' mere fullness of being and of our own non-natural status. He states how "within the pit of that lack […] man installs in a single stroke his *property* and his *superiority* over what is called animal life."[659] Derrida explodes the limit separating 'the human' from 'the animal', condemning "the violence [and] *asinanity*" of man "depriving the animal of every power of manifestation, of the desire to manifest *to me* anything at all, and even to manifest to me in some way *its* experience of *my* language."[660] His method of "limitrophy" asks not whether "there is a limit that produces a discontinuity" but "attempts to think what a limit becomes once it is abyssal, once the frontier no longer forms a single indivisible line."[661] Derrida seeks to multiply, not erase the limits separating humans from animals, asserting a complexity within the animal kingdom that humans are not – and perhaps could never be – aware of. Derrida's critique fundamentally lies with our human capacity as a naming species that leads us to believe that through words we can name, know and grasp everything about the world. He instead emphasises the blind arrogance of this belief and challenges the sacrificial violence contained within our words.[662]

[657] Dooren, p.68.
[658] Derrida, *The Animal,* pp.31-2.
[659] *Ibid.,* p.20.
[660] *Ibid.,* p.18. *Asinanity* is translated by David Wills from the French *bête* which "has the somewhat archaic sense of the English 'beast' but is also used as a slightly familiar word for 'animal'." As an adjective [*bêtise*] it means 'stupid', which I have often translated below as 'asinine' in order to retain some connotation of animality." Wills in Derrida, *The Animal,* p.162, n.6.
[661] *Ibid.,* p.31.
[662] Derrida looks back to the story in the book of *Genesis* where "man *alone* and *before* woman […] gives their names, his names, to the animals." Through this act of naming comes Adam's power to "tame" "every living thing that crawls on the earth" and "*in order to see* […] in view of providing sacrificial flesh for offering to that

For Derrida "[t]he animal is a word, an appellation that men have instituted, a name they have given themselves the right and authority to give to the living other."[663] A term cast by humans to designate and name themselves human in opposition, 'the animal' is nothing but a stereotypical label of gross generalisation, positing the ultimate ethical difference between humans and animals. Tobias Menely writes how "the sundering of loquacious man from the silent animal has had the effect of restricting the sphere of obligation", justifying what Derrida names a "noncriminal putting to death."[664] Labelled 'animal', animals are excluded from human law and ethics and routinely sacrificed (for our food, clothing, cosmetics or land) in the name of what is 'proper' to 'the human'.

Derrida asked his French audience to substitute in their heads the word *animot* every time he said the plural *animaux.*[665] Derrida wanted his audience to *hear* the animals in their plural singularity rather than their generality[666], disrupting the pattern of homogenisation.[667] This neographism becomes symbolic of an irreducible multiplicity of mortals, its very composition a monstrous hybrid, a chimera.[668] *Animot* becomes "a living metaphor" that is "always pointing to a space beyond language (even if it is always already in language)" to expose its very limits.[669] Derrida troubles the violent naming capacities of humans, pushing our language beyond itself to demonstrate how animals (and words) cannot be confined to the meanings humans conjure. In his attribution of the word (*mot*) 'as such' – language, the access to the being of beings, that which is traditionally denied 'the animal' – to animals, Derrida subverts the Heideggerian philosophical distinction between humans and animals based on a peculiar access to being 'as such'. Derrida's *animot* does not strive to "[give] speech back" to animals but rather to "think" of what he calls "the absence of the name" as something other than a "privation" or "lack."[670] Rather than extending the

God." *Ibid.,* pp.15-16 and 42. Adam's ability to name beasts is equated with his ability to see deeply, with a sight given by God. Through naming animals, the whole of the animal is made present to Adam and is knowable, Adam therefore knows animals through and through. Ron Broglio writes how "for Bacon and his contemporaries, banishment from Eden resulted in our inability to perceive animals and thus through perception, understand them. After the fall, language is fractured and no longer coincides with the fullness of being of the things named. So, for Bacon, where language and perception lack utility, science must make up the difference." *Surface Encounters,* p.7.

[663] Derrida, *The Animal,* p.23.

[664] Tobias Menely, *The Animal Claim: Sensibility and the Creaturely Voice,* (London: University Of Chicago Press, 2015), p.38. See also Jacques Derrida 'Eating Well', The philosopher here condones the sacrificial fate of animals and animalised humans in contrast to the laws against murder awarded to other humans. He coins the phrase "carnophallogocentrism" to refer to this supremacy humans hold over animals based on their capacity for language/rationality (*logos),* alongside possession of a *phallus* and their *carnivorous* habits.

[665] Derrida, *The Animal,* p.47.

[666] Calarco, p.155.

[667] David Wood, 'Thinking With Cats' in *Animal Philosophies* ed. by Matthew Calarco and Peter Atterton (London: Continuum, 2004), pp.129-144, p.135.

[668] Derrida, *The Animal,* p.41.

[669] Eva Hayward, 'Lessons from a Starfish' in *Queering the Non/Human,* ed. by Noreen Giffney and Myra J. Hird, (Aldershot: Ashgate Publishing Ltd., 2008), pp.249-264, p.260.

[670] Derrida, *The Animal,* p.48.

ability of language outward beyond the human sphere, one can instead move in the opposite direction and erode that notion of language from within. Derrida shows, writes Cary Wolfe, "that if animals never quite possessed it, then neither do we."[671] No longer lacking, as such, that which is needed to be absent in order to not be human, animal 'lack' is no longer a 'lack' 'as such', but a constructed negation assigned as a mark of definition from said human.[672]

Derrida destabilises the foundations of animality and in the process humanity, the opposition of the two being crucial to either's identity. 'The animal' as both threat and necessity to humanity troubles the limits that we erect to define ourselves as exceptional subjects. As Derrida "multiplies the differences [amongst animals], bringing to our attention the fragility and porosity of the supposed frontiers of the 'proper'", the philosopher opens up the limits "upon which we have presumed for so long to found the traditional opposition between 'man' and 'animal.'"[673] Derrida points to humans as the real "*bêtes*" in our attempt to judge animals and their attributes according to our own standards. By deconstructing that which we know as 'animal', but also that which we know to be 'human', Derrida proposes stepping beyond human limitations to embrace differences and confront those others typically denied their own way of being and therefore our response. He suggests the possibility of judging animals not on our terms, but on theirs.[674]

Unsilencing the Silenced

> The said question of the said animal in its entirety comes down to knowing not whether the animal speaks but whether one can know what *respond* means.[675]

The Great Silence was initially developed as a multi-screen installation in conjunction with several other works at the Philadelphia Museum of Art and The Fabric Workshop in 2014.[676] Allora and Calzadilla explain how "the screen size and placement is based on a Pythagorean triangle, which was considered to be an emblematic representation of human intelligence and a sign which CETI (Communication with ExtraTerrestrial Intelligence) researchers believe could be understood by advanced extra-terrestrial life forms should they turn out to exist." This arrangement "makes it

[671] Cary Wolfe (ed.), *Zoontologies: The Question of the Animal,* (Minneapolis: University of Minnesota Press, 2007), xviii.
[672] Derrida, *The Animal,* p.20.
[673] Marie-Louise Mallet, 'Foreword' in Derrida, *The Animal,* ix-xiii, x-xi.
[674] I am inspired here by ethologist Frans de Waal's book *Are We Smart Enough to Know How Smart Animals Are?*
[675] Derrida, *The Animal,* p.8.
[676] It was remastered as a single channel version for a show at Quartz Studio in Turin in 2016. Allora and Calzadilla, personal communication.

difficult if not outright impossible to take in all the screens at once." For the artists this reinforces the idea of "an irreducible gap" between the different forms of intelligence present on screen.[677] Positioned between these three screens, I, a human viewer, am immersed within the opposing cries of both technology and wildlife. Sounds which cannot be fully translated into, nor deciphered by human language overwhelm me, whilst my eyes move from screen to screen, attempting to coalesce the two worlds. Frames shift to juxtapose the fertile and rustling rainforest, the inanimate looming telescope and eventually, the watchful gaze of the parrots.

Chiang's script continues to acknowledge the knots and gaps between living and non-living, human, animal, technological and cosmic players to cast doubts on anthropocentrism.[678] Written from one parrot's perspective, the subtitles emphasise how humans have become so lost in technological devices and the artificial languages and intelligences that these communicate, that other forms of intelligence have been hushed into silence. These words have no vocal origin, they cannot be heard but solely transcribed in translation. In the film's opening this text reads like a voice from nowhere, the first frames not revealing who is uttering the words despite the use of the first person "I" (figure 71).[679] The second frame, a shot of the rainforest floor, despite making audible the *iguaca* calls, does not reveal them to our gaze (figure 72). The scene is almost without movement, aside from quivering leaves in the foreground. The parrots remain hidden from human sight until four minutes and 49 seconds into the film. These frames without visible life affirm the words of the parrot herself who recounts how "[h]undreds of years ago, my kind was so plentiful that the Rio Abajo forest resounded with our voices. Now we're almost gone."[680]

The parrot's words reflect upon acousmatic voices, ventriloquisms and vibrations. These which form the basis of speech, the origins of language and the universe itself. She unites her own species' past with that of humankind's, focussing on our shared capacities for vocal learning and the "special relationship with sound" this awards us both.[681] Consolidating the Biblical creation story, the scientific Big Bang theory and Hindu mythologies of the mantra "Om", the parrot constructs a hybrid fable which counters the stories of absolutism that humans tend to prefer.[682] In the process she challenges beliefs about human exceptionalism and essentialism, like in Derrida's thought. Suggesting not discrete, singular origins but one chimerical foundation for all life, meaning and sounds, this is a fictive fabulation full of multiple possibilities – the recognition of intelligences and languages on Earth no longer uniquely human – and at the same time looming warnings and

[677] *Ibid.*
[678] *Ibid.*
[679] *GTS.*
[680] *GTS.*
[681] *Ibid.*
[682] *Ibid.*

Figure 74: *Still from Allora and Calzadilla, The Great Silence* (2014), courtesy the artists.

Figure 75*:* Still from Allora and Calzadilla, *The Great Silence* (2014), courtesy the artists.

consequences. The myopic vision of humans is brought to inspection, directly implicated as threatening Planet Earth with the silence that they meet everywhere else in the universe. As human life increasingly encroaches upon the homes of other species, soon all that will be left will be humans and our prostheses, and the artificial sounds that these make.

Donna Haraway's 'A Cyborg Manifesto' does not long for a return to "phallogocentric origin stories" about the Fall and fatally undermines any ideas about nature as "a source of insight and promise of innocence."[683] Haraway criticises beliefs in one "common language" that allows "universal translation, and so unhindered instrumental power."[684] Instead, we must "reconstruct […] the boundaries of daily life, in partial connection with others, in communication with all of our parts." Haraway concludes her chapter with the affirmation: "Cyborg imagery can suggest a way out of the maze of dualisms in which we have explained our bodies and our tools to ourselves."[685] Binary oppositions which are composed out of relationships of difference, often with one side being sacrificed for the constitution of the other, as well as unified totalities under which individual specificities are erased, are not what she advocates. Instead, a "subtle understanding of emerging pleasures, experiences and powers with serious potential for changing the rules of the game" is what is needed, a willingness to inhabit the boundaries.[686] Only through fabulous fiction and stories can the alternatives be summoned, the marginalised given voice and power, and the illusion of an "autonomous" "One" "self" be erased.[687]

In assigning an understandable and unique voice to a species normally scoffed at for mere mimicry – left unheard when speaking in their own tongue – Allora and Calzadilla provide this parrot with "access to the power to signify."[688] Just like the stories and writings of the U.S. women of colour to which Haraway refers, the story of the parrot is neither "phallic nor innocent" and "not about the Fall."[689] Instead the parrot narrates her own constructed myth, and in the process, "seiz[es] the tools to mark the world that marked [her] as other" creating a possibility for her words to live on once she disappears from the forest. Like Haraway's cyborg fiction, this too is "about the power to survive."[690] Through the ability of language to become absent, reaching across time and space, enduring beyond the field of vision and outside of earshot, *The Great Silence* provides the voice of the parrot a longevity, a meaning outside of the film itself. Not only this, but as I read the parrot's words aloud to

[683] Haraway, *Simians,* pp.152-3.
[684] *Ibid.,* p.164.
[685] *Ibid.,* p.181.
[686] *Ibid.,* pp.172-3.
[687] *Ibid.,* p.177.
[688] *Ibid.,* p.175.
[689] *Ibid*. The story of the Fall resulting in the separation of Man from Nature, Innocence and Woman.
[690] *Ibid.*

myself, her voice echoes in my head, resounding in my mind. By awarding human thought, speech and morality to a nonhuman species, *The Great Silence* emphasises the fragile and porous nature of the boundaries that humans erect to separate themselves from all other life on Earth. In so doing, the film proposes a different way for humans to relate and respond to animals.

Emerging in the context of the Cold War and its nuclear threats, Haraway's 'Cyborg' blurs human/animal/machine boundaries to suggest we are all "chimeras" and "hybrids" and asserts how these forms of life normally firmly differentiated have all evolved together to remain inextricably in relation.[691] Part of the impetus for this "machine/body blurring" writes critic Stacey Alaimo, is "to make machines less threatening, more controllable, less Other." By distorting the boundaries between humans and machines, the worship of technology – rampant at Haraway's time of writing – can be dissuaded and "greater responsibility among humans for machines" can be encouraged.[692] Haraway looks to technology to open up new possibilities of relating – across the sexes, culture and nature, and humans, animals and machines. Allora and Calzadilla also explore such possibilities. They use technology to create their film, juxtaposing nature and technology within the film itself, and invite the human viewer into this space. What the film reflects is the co-production ongoing between and across these different realms, which counters beliefs about original truth or one discrete essence. It identifies a world composed of relationships across differences, even with those we do not like to admit to.

Contemplating the shared pasts of humans and parrots alongside a technological future where the only life left may be humans and their tools, I am urged to contemplate my own role in this narrative. I become implicated as responsible for the illegitimate fusion I watch on screen, erupting the boundary designated between the two worlds. The stark contrast between the lush, sweeping greenery of the rainforest and the unfamiliar artificiality of the telescope creates a scene at once haunting and poetic, even sublime, "summoning aeons of time and all forms of consciousness, of life, of cosmic communities" into the frame.[693] This becomes a space of more-than-human potential, agency awarded to both nature and technology in their own rights. Humans themselves denied a presence on screen, I imagine how I might be reflected in or moulded by the images I see – emerging out of animality or morphing into technology. As we become increasingly dependent on our tools now capable of extending our senses and cognition outside of our bodies and beyond our planet, we are becoming increasingly blind and deaf to our nonhuman neighbours right here on Earth. As shots of the forest become increasingly filled with manmade structures and

[691] *Ibid.,* p.150.
[692] Alaimo, pp.147-8.
[693] Lilly Wei, 'Allora and Calzadilla: Intervals' in *Studio International,* (02/04/14) available: https://www.studiointernational.com/index.php/allora-calzadilla-interview-intervals-film-conceptual-art, [accessed 26 April 2019].

Figure 76: Still from Allora and Calzadilla, *The Great Silence* (2014), courtesy the artists.

Figure 77: Still from Allora and Calzadilla, *The Great Silence* (2014), courtesy the artists.

materials, I am reminded of the encroaching threat humanity poses to other life on the planet, their spaces, sounds and significations appropriated or drowned out. One day perhaps Earth, just like the vast cosmic space we frantically investigate for signs and sounds of other life, will only echo with our own voices

The Human Echo Chamber

Despite human assertions that animals cannot communicate with us nor elicit any human(e) response, it is in fact our prosthetic device Arecibo – both ear and mouth capable of reaching across the universe – that appears monstrous and illegitimate in *The Great Silence*. I cannot understand the radio waves that jump across the screens transmitting information, nor identify the different mechanics that are brought into view. Whilst feelings of empathy and compassion emerge for the parrot given a face and voice, the indecipherable and untranslatable sights and sounds of the telescope provoke awe alongside confusion and unease. Whilst the installation's layout acknowledges the knots and gaps between different forms of intelligence, the film's narrative suggests that you don't need to speak a shared language to understand what is going on. Parrots and humans *can* speak the same language. Yet humans continue to deny parrots their response. Perhaps the answer lies in the capacity to listen to the world around us instead of searching for our own echoes in the universe. The parrot's tale averts totalising narratives of division and individuality and is instead a tale of inextricable entanglement from which response-ability can emerge.

Allora and Calzadilla zoom in to focus on the eyes of the parrot, eyes which piercingly gaze back. (figure 75). The artists challenge Emmanuel Levinas's denial of animals the right to human response due to their supposed absence of a face. Claire Colebrook writes that "the face gives us something like pure life […] the animating spirit of which matter is a sign. The face for Levinas, after all, is not a sign or mediation of humanity so much as an experience or rupture with all mediation and sense."[694] Allora and Calzadilla's film animates the 'bare life' of this particular parrot, her expression mirroring my own sense of sadness and grief. She ruptures my experience and sense of self allowing empathy for her condition to emerge from a face-to-face encounter not normally available. Boundaries between humans and animals are shattered as this parrot not only looks back but seems to speak to me too.

In our inability to recognise the intelligence of other nonhuman life on Earth, humans have focussed increasing attention on finding intelligent life 'out there'. In 1974 "astronomers used Arecibo to broadcast a message into outer space intended to demonstrate human intelligence." It

[694] Colebrook, *Posthuman,* p.150.

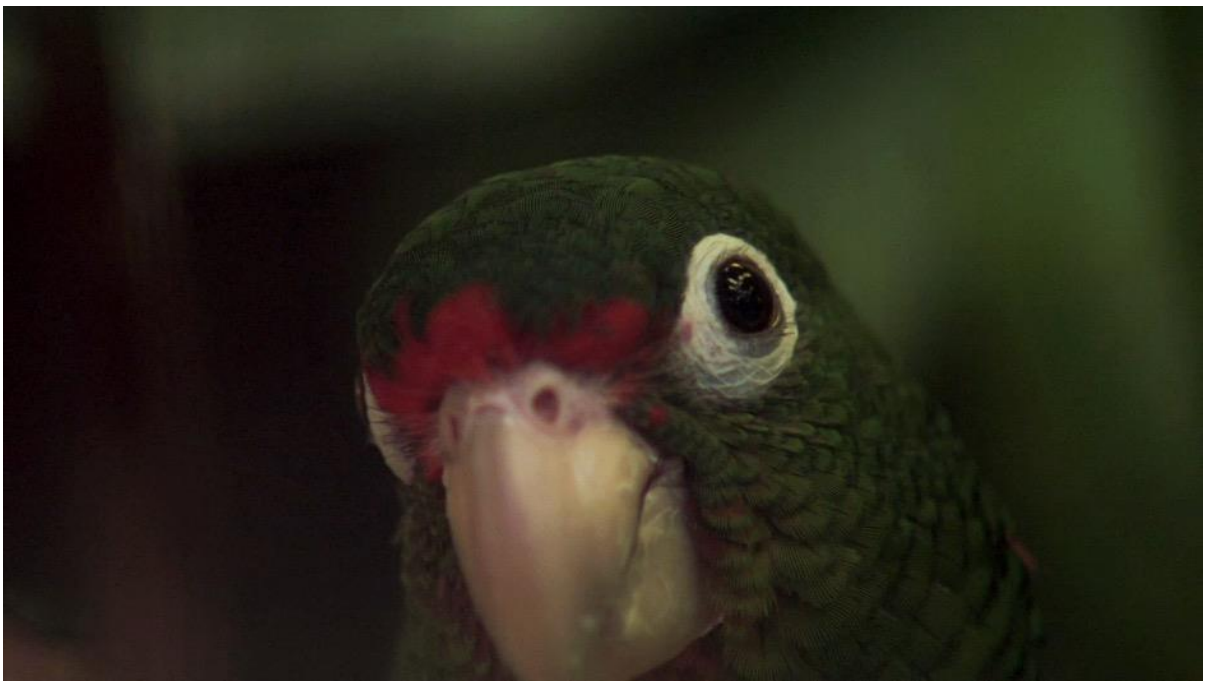

Figure 78*:* Still from Allora and Calzadilla, *The Great Silence* (2014), courtesy the artists.

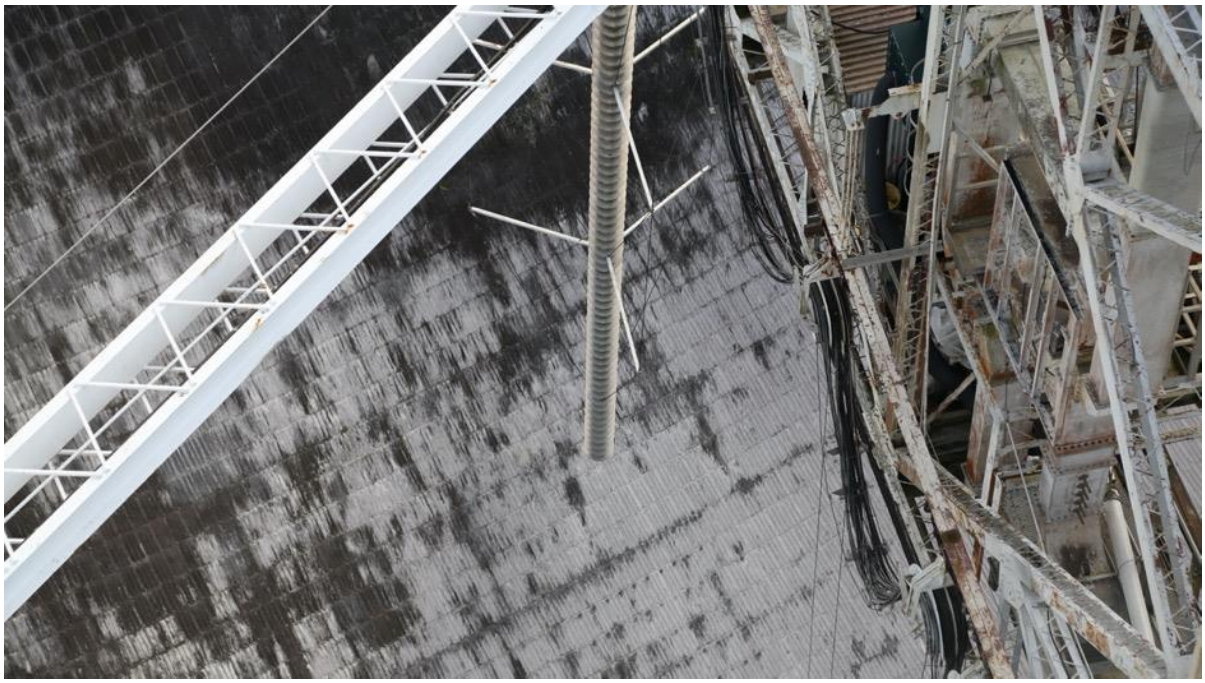

Figure 79: Still from Allora and Calzadilla, *The Great Silence* (2014), courtesy the artists.

Figure 80: Still from Allora and Calzadilla, *The Great Silence* (2014), courtesy the artists

was an interstellar radio message carrying basic information about humanity and Earth sent to globular star cluster M13 in the hope that extraterrestrial intelligence might receive and decipher it.[695] The broadcast was a mathematical one, lasting less than three minutes in length. It will take nearly 25,000 years for the message to reach its intended destination and an additional 25,000 years for any reply to return to Earth.[696] The Arecibo message is viewed more as a demonstration of human technological achievement than any real attempt at conversation with extra-terrestrials.[697] In fact, its overtly complex message stands more as a reminder of the inevitable limitations humans meet when we attempt to communicate with other life on our own terms.

[695] 'Arecibo Message' on *Wikipedia.org,* (n.d.), available: https://en.wikipedia.org/wiki/Arecibo_message, [accessed 21 January 2019]. "MI3 located some 25,000 light years away was a large and close constellation of stars that was available in the sky at the time and place of the ceremony."

[696] Written by astronomer Dr Frank Drake then at Cornell University and creator of the Drake equation, with help from Carl Sagan amongst others, it consisted of 1,679 binary digits. The number 1,679 was chosen because it is a semiprime (the product of two prime numbers), to be arranged rectangularly as 73 rows by 23 columns. These encoded: the numbers one to ten; atomic numbers for the elements that make up DNA; (the elements of deoxyribonucleic acid (DNA) are hydrogen, carbon, nitrogen, oxygen and phosphorous); the human graphic was accompanied by the dimension (physical height) of an average man; the formulas for the sugars and bases in the nucleotides of DNA; the number of nucleotides in DNA and a graphic of its double helix structure; a graphic figure of a human and the human population of Earth; a graphic of the solar system indicating which planet the message is coming from and a graphic of the Arecibo radio telescope. *Ibid*.

[697] According to the *Cornell News* press release of November 12th, 1999, the real purpose of the message was not to make contact but to demonstrate the capabilities of newly installed equipment. *Ibid.*

The parrot in Chiang's fable labels this "humanity's contact call" and draws attention to the ambiguities inherent to the human search for intelligent life.[698] She emphasises how human intelligence, so focussed on expanding our capacities beyond our own bodies and planet, overlooks the other kinds of intelligence expressed by animal kin with whom we share our home. We deny our animal past and present as we short-sightedly look ahead to our own future, a future which is becoming increasingly of our own making. Our *humanity* should lead us to recognise the fallacy and paradox of this, it ought to be *inhumane* to ignore animal suffering.[699] Surely it is irrational to believe we can live in a world only of humans. Yet these searches reinforce the fact that we are only able to appreciate that which can be defined in human terms. The parrot considers the Fermi paradox, the apparent contradiction between the lack of evidence and high probability estimates for the existence of extraterrestrial civilizations. Despite the increasing range of searches into space, all humans have met is silence. Yet the possibility that humans represent the only intelligence in the universe stands as preposterous.[700]

What the writers of the Arecibo message overlooked is that life in space may not judge intelligence, or indeed anything, in the same way that humans do. Restricting our contact call to intelligent life defined only on certain human's terms, this message is anthropocentric through and through, bouncing off Arecibo's dish only to echo back our own voice. The parrot speculates over possibilities for the silence of the universe, such as that other "species actively try to conceal their presence, to avoid being targeted by hostile invaders." She calls this strategy wise, based on her own experience of being "driven nearly to extinction by humans."[701] The parrot's moralising words – which sharply hit home as stubborn truths – serve to counter human anthropocentric ideas about intelligence stemming from *logos*. Remaining trapped inside our definitions and categorisations, humans have been unable to free ourselves from our own echo chamber, to hear beyond our language labels and appreciate 'otherness' living right under our noses.

Another explanation offered for the Great Silence is the possibility that "intelligent species go extinct before they can expand into outer space", thus rendering "the hush of the night sky [as] the silence of a graveyard."[702] These words seem to loom as an omen or warning to humans for the damage we are inflicting upon the planet with preoccupations for our own confirmation bias that we are in fact *world-forming*. "Soon this rainforest may be as silent as the rest of the universe" broaches the parrot, and soon may the whole of Earth be silent except for the overwhelming noise of human

[698] *GTS.* See discussion of birds' contact calls in the section 'Why do Parrots Parrot?'.
[699] Claire Colebrook, 'Fragility' in Turner *et.al,* pp.247-261, p.248.
[700] 'Fermi paradox' on *Wikipedia.org,* (n.d.), available: https://en.wikipedia.org/wiki/Fermi_paradox, [accessed 16 December 2019].
[701] *GTS.*
[702] *Ibid.*

sound pollution generated by humanity's advancement.[703] As we ruthlessly define ourselves separate from and above all other life, and frantically seek out our 'equivalents' in space, what we ironically achieve is a decrease in the vitality of our home but also violently restrict our ability to forge relationships with those around us. As an inherently social species, this surely proves detrimental to our psychological well-being. No longer an imitating flatterer, the parrot in *The Great Silence* summons up the hidden truths from the deepest depths of the human subconscious, a truth we are unwilling to face as we selfishly advance our own kind. With our power and domination has come a great deal of loss and devastation, and although humanity tries its hardest to ignore the damage it is causing, the consequences of this damage are only becoming more prevalent. This is not a false narrative nor a fabricated fiction, but the reality of the human situation we choose to repress, the future humans and all other life on the planet now face as a result of anthropogenic violence.[704]

With a subtle subversion of one of the stories most comfortable in the Western world, the parrot's tale acts as a reminder of human responsibility to preserve other life, but also as a damning indictment of humanity's future. Allora and Calzadilla resort to giving this bird a human voice to resurrect a repressed story.[705] Kelly Oliver critically asks: "Can we shed tears for others without reducing them to fables that embody qualities we value in ourselves?"[706] It seems we can only listen to other species when they speak our own language, just as we expect extra-terrestrial life to communicate back with human codes and signs we classify as intelligent. Instead, perhaps it would be wiser to acknowledge the expression of voices and knowledges outside of human structures that are resplendent across the planet. Human beings might listen to the voices of those they share their home with, acknowledging the fact that we do not need to speak the same language to understand what is going on, before it is too late to respond. Although Allora and Calzadilla do impose a human

[703] *Ibid.*

[704] The causes and effects of the so-called "Anthropocene" are radically uneven, the Western world contributing the most damage whilst developing nations suffer the worst consequences. See T.J. Demos, *Against the Anthropocene,* (Berlin: Sternberg Press, 2017) for further discussion.

[705] At the December 2015 Paris Climate Summit (COP21), a video was screened of a 44-year-old western lowland gorilla named Koko. Her species is critically endangered in the wild, mainly as a result of poaching and the spread of disease. Koko was filmed using human sign language to speak to the national representatives in attendance, communicating an urgent message to humans to protect the environment. Sentences included "Man Koko love. Earth Koko love, But man stupid." And "Koko sorry. Koko cry. Time hurry! Fix Earth! Help Earth! Hurry!" Although the film attracted attention at the time and was broadcast with the intention of spurring environmental action, one cannot help but feel shame in enforcing our own human (sign) language upon another species in order to get them to communicate to us something that we already know. As Alison Suen writes in her book *The Speaking Animal: Ethics, Language and the Human-Animal Divide,* this conversation cannot be regarded as egalitarian or on the animal's own terms because a dialogue with Koko "is legitimised only by the valorisation of human [sign] language." (London: Rowman & Littlefield, 2015), p.32.

[706] Kelly Oliver, 'Elephant Eulogy: The Exorbitant Orb of an Elephant' in Turner, *The Animal Question,* pp.88-104, p.99.

voice onto the parrot in *The Great Silence,* I find the value of their work manages to extend beyond this anthropomorphism through the parrot's use of words that we do not normally like to hear, reaching out of our human echo chamber to conjure an alternative soundscape. Key notes within this soundscape were made audible through the artists' engagement with biosemiosis.

Moving into Unthought

In *Of Grammatology* Derrida interrogates the phonologocentric tradition, "which conflates voice with ideality of meaning and self-presence of the thinking subject."[707] Derrida coins the neologism *différance* to connote both difference and the deferral of textual meaning. The deliberately yet inaudibly misspelt *différance* is used to emphasise (in part one's deconstruction of Ferdinand de Saussure's semiology) that words and signs can never fully summon forth what they mean and must rely on their differentiation from other words and their meanings in order to signify.[708] In emphasising the differential relationships of the signifier, Derrida demonstrates nonmeaning to be the condition of possibility for meaning and passivity to be the condition of possibility for action. Meaning is deferred through an endless chain of signifiers. Derrida's linguistic fabrication comes to show the very fabricated nature of concepts, institutions, subjects and words themselves. *Différance* challenges language as the originary source of meaning and the subject as ethically autonomous through its deliberate generation of ambiguity. *Différance* thus opens the way up for ethical responses to others to come.

Biosemiotics advances Derrida's displacement of human words by reading "processes of sign interpretation and information coding and decoding […] on every level of life organisation." It expands the process of semiosis beyond "human communication [into] a universal principle underlying the basic processes of all life" by identifying "all living organisms as semiotic systems" explains Slovakian scientist and philosopher Dušan Gálik.[709] Biosemiotics challenges any understanding of the world as totally representable by human codes of knowledge where all reality is circumscribed within the symbolic realm. This emerging mode of science is greatly inspired by Uexküll who sought to demonstrate how the perceptions and lifeworlds of all organisms each

[707] Menely, p.38. Initiated by Aristotle's philosophy and continued by thinkers including but not limited to Edmund Husserl, Ferdinand de Saussure and Jean-Jacques Rousseau.

[708] For Saussure, the linguistic signifier bears no resemblance "to that which it signifies: that difference conditions the very possibility of signification." Signifiers only signify based on their ability to be distinguished from other signifiers, thus creating "an open field of differentiating signs" in which exist "only differences without positive terms." Judith Butler, 'Introduction' in Derrida, *Grammatology,* vii-xxiv, xii. Derrida's deconstructive task is thus to understand the exclusionary procedures that establish such a relationship based on binary opposition. Derrida examines the differences that cannot appear within – are barred from entry into – these dualistic relationships: supplements, remainders and ruins.

[709] Dušan Gálik, 'Biosemiotics: A New Science of Biology?' in *FILOZOFIA,* Roč. 68, č.10, (2013) pp.859-67, pp.860-1.

equally worthy of attention. The biologist places all life on one level plane and makes clear how each animal occupies its own *Umwelt.* Within one's bubble one perceives subjective signs – events that signify – which in turn join together to form the qualities of external things – serving as perception marks for actions. It is here that Heidegger's appropriation of Uexküll's theories might be identified – each animal inhabiting an individual life world, confining meaning to these bubbles of perception.[710] However, biosemiotics reads in Uexküll's theories that although organisms live within a bubble that "encloses their space", these bubbles "effortlessly overlap one another because they are made up of subjective perception signs." For Uexküll, to perceive is to bestow meaning, "[e]verything a subject perceives belongs to its *perception world* and everything it produces, is its *effect world.*"[711] Uexküll's work challenges anthropocentric beliefs that only humans have the meaning-making capacities to be named and naming subjects; animals too interpret and bestow meaning on the world in unique ways becoming individual subjects in their own right.

Uexküll suggests that if "[t]here is no space independent of subjects" then human belief in a world where everything is knowable on human terms cannot stand. He points out how humans continue to "cling to the fiction of an all-encompassing world-space as they can therefore get along more easily with each other."[712] His radical science emphasises that humans fallaciously construct their worlds using language so as to be able to place a limit on experience, a limit they believe they control, a limit they use to define themselves and exclude any and all things they deem unknowable, indescribable, unnameable and thus threatening. This limit is now explodable.

Geoffrey Winthrop-Young writes in the afterword to a reprint of Uexküll's *Foray* that the biologist "counters speciesism by bridging the [Heideggerian] abyss between humans and nonhumans."[713] But Uexküll does not strive to make nonhumans totally knowable nor readable, his human perspective always weighs down on the meanings he uncovers in the animal world. What Uexkull's theories instead emphasise is the very *unknowability* of animals. Human perception (and language) can no longer be elevated above the perceptions of other living organisms. But humans, like animals, remain trapped within their own *Umwelt* of meaning and meaning-making, thus

[710] See section 'Humanist Sacrifice' of this chapter for further discussion of Heidegger's philosophies. For Heidegger, animals, unlike humans, do not think or speak to create their world outside of themselves - the world as such - but are restricted to a predefined environment; lacking language, they lack the ability to exist, imagine or to be present "as such".

[711] Uexküll, *Foray,* p.43. Belgian philosopher Despret writes how in his work "every perception makes the animal a 'lender' of meaning, that is to say a *subject.*" She continues that "every meaningful perception implies a *subject,* in the same way that every subject is defined as who one bestows meaning." *What Would Animals Say,* p.162.

[712] Uexküll, *Foray,* p.70 Uexküll instead urges his readers to recognise "Nature's plan as an ordering factor" for example in the weaving of a spider's web or the building of a bird's nest, two tasks without "individual goal" but part of a larger system, p.92.

[713] Geoffrey Winthrop-Young, 'Afterword' in Uexküll, *Foray,* pp.209-243, p.232.

alienated from other life-worlds. Human knowledge of animal worlds remains superficial, clouded with anthropocentric projections. Biosemiotics as a science investigates the signs and significations found outside of the human realm and awards processes refined over evolutionary time meanings in themselves.

In an interview with Lilly Wei for *Studio International* in 2015, Allora and Calzadilla recount the engagement of their work "in questions of language and discourse" and explain how "[they]'ve found a bridge between the two in biosemiotics." They describe this "emerging field" to "reconnect agents, actions, and objects in a set of sign relations not reducible simply to human modes of perception and apprehension."[714] Eduardo Kohn provides an example for understanding biosemiosis in *How Forests Think.* The anthropologist describes how "the specific shape of the anteater's snout and tongue captures certain features of its environment, namely the shape of ant tunnels." He reads "this evolutionary adaptation" as "a sign to the extent that it is interpreted (in a bodily way, for there is no consciousness nor reflection here) by a subsequent generation with respect to what this sign is about." As the organism develops, these interpretations are incorporated so that the body of the anteater itself "functions as a new sign representing these features of the environment" which "will be interpreted as such by another subsequent generation of anteaters in the eventual development of that generation's body." Kohn's explanation helps us to understand "that the logic of evolutionary adaptation is a semiotic one", those lineages of anteaters whose "snouts and tongues less accurately captured relevant environmental features […] did not survive as well."[715] His words demonstrate how organisms are not trapped in non-meaning or fixed in their responses to their environment, but that they respond to, condense and express their environmental conditions in creative and intelligent ways over time, just like Alex the Parrot. Kohn reads processes of signs across the natural world, extending semiosis outside of the rational and conscious human realm of language and destabilising anthropocentric principles that humans and our capacities are what form the world

In *The Great Silence,* Allora and Calzadilla investigate examples of biosemiosis. Their camera frames encompass wide shots of the rainforest which are accompanied by the sounds of life living there, alongside the mechanics of the telescope. The artists suggest at evolutionary marvels, processes of communication, and an array of different signs, significations and ways of relating within this ecosystem itself. These signs, untranslatable into human words, are left to signify in their own way beyond human comprehension. We hear the parrots' calls resounding within this ecosystem and read their flight paths moving across the forest canopy. Yet these signs can only be interpreted, deciphered and decrypted. These traces of life cannot be seen, they cannot be fixed in

[714] Guillermo and Calzadilla in Wei.
[715] Kohn, p.74.

their meaning, grasped by human knowledge and neither named nor known.[716] The film accommodates sonic and visual expressions of nonhuman ways of being and their ways of relating, which awards these expressions of self a significance beyond the bubble of the human *Umwelt*. Nonhumans establish a meaning and selfhood of their own and on their own terms. At the same time, through a creative inhabitation of human constructs – the Arecibo Observatory, the written word of the subtitles and the human myths within the parrot's own fable – Allora and Calzadilla demonstrate the unknowability of human systems even to us. Allora, Calzadilla and Chiang successfully recode communication, subverting human command and control over the word and allow this species the chance to mark the world with the signs previously used to mark her as other. They animate nonhuman signs with a life force and significance beyond human constructions, finding meanings that are normally overshadowed and telling narratives that are typically silenced. In this unrational space constructed by humans, nonhuman life is given space to express itself in ways that break the limits of the words/world that we know.

Language as Feedback Loop

> In loosening the tethers of what it means to be human, we find new avenues and lines of flight by which to traverse the un-thought of thought.[717]

Dorion Sagan points out in his introduction to Uexküll's *A Foray into the Worlds of Animals and Humans*: "Our strength at connecting things arbitrarily by riveting signs may well be our special strength but it is a strength based on a kind of lie." This lie is what he identifies as "the power of invention that we take to be real, forgetting the history of our associations, the connections forged by thought."[718] Through our desperate and ceaseless efforts to mark ourselves and our ways of being as superior and dominant, humans fail to see what really lies before or beneath our words. Our words themselves are the real lies. The unthought that precedes linguistic representation is never voiced, and our shared past, present similarities and future connections with the natural world and animal kingdom are erased, along with the individual differences and specificities within these realms of otherness.

[716] Here I paraphrase Derrida who writes in 'Ants' "that there can be no sexual difference without traces […] But henceforth, sexual difference remains to be interpreted, deciphered, decrypted, read and not seen. Legible, therefore invisible, an object of testimony, and not proof", p.21.
[717] Broglio, *Surface,* p.125.
[718] Dorion Sagan, 'Introduction' in Uexküll, *Foray,* pp.1-34*,* pp.29-30.

If the meaning of human life comes from the word, without words nothing exists. For Derrida, this means we need to oblige both the past and the future, opening ourselves up to meanings to come, meanings we cannot anticipate, unimaginable impossibilities. Only through this process can we accommodate the unthought and the unspoken within our ethical realm. Derrida opens *The Animal* with a promise to "entrust [him]self to words that, were it possible, would be naked."[719] He plays upon the fact that he will "speak endlessly of nudity and the nude in philosophy" starting "from Genesis". Yet Derrida also wants to draw his listener's attention to the fact that he will attempt to destabilise and deconstruct words themselves, even "the word" (*mot)* itself. In the process he will uncover that which lies naked, hidden beneath linguistic generalisations. Derrida desires to provide a thought process in which he does not react to pre-ordained conventions but rather to "[invent] an unheard-of grammar and music."[720] He dreams of a future where another mode of inscription can be expressed, intimated from within the limits of the present. Derrida seeks to understand not through linguistic, conceptual or rational representation, but with a creative and natural method of communication. If the *power* of language is no longer confined to the human, then what we must acknowledge and listen for is a language *beyond* language.[721]

For me, Derrida's philosophical words fail to break the limits of language. It is for this reason I look to the science of biosemiotics and an artwork to delve deeper into the realms of unthought and listen for a language beyond language. The parrot in *The Great Silence* tells us how "[w]hen we speak, we use the breath in our lungs to give our thoughts a physical form."[722] The parrot identifies a materiality and generativity to words – words are animated by the breath in our lungs to become "our intentions and our life force." No longer linguistic impositions that only humans are able to apply to the world, words are animated to convey the life of matter and different ways of being. Words become a means of self-expression. The parrot appropriates René Descartes' famous proposition "I think; therefore I am" to instead assert "I speak, therefore I am."[723] The parrot re-signifies herself by appropriating and re-marking an ancient philosophy that demarcates animals as beneath humans based on their incapacity for rational thought. Parrots have displayed examples of consciousness and cognition, and as vocal learners can also speak. But the meaning here runs deeper – perhaps Allora and Calzadilla are in fact suggesting that even if we cannot understand the sounds and calls of other species, how do we know that they are mute? The sounds and language with which animals use to communicate remain un-heard but that does not mean they cannot be considered. When contemplating this conclusion, the foundations of humanity as *the* exceptional

[719] Derrida, *The Animal,* p.1.
[720] *Ibid.,* p.64.
[721] Colebrook in Turner *et.al.*, p.256.
[722] *GTS.*
[723] *Ibid.*

species crumble, leaving behind only different and interconnecting ways of being who relate to one another. In a world without words, each individual way of life gains a meaning in itself, independent of any other identity and allowing relationships to be cultivated outside of binary dualisms or hierarchies.

Although human life is expressed through the linguistic constructions we use, animating our intentions and ways of life, for other species who live without words, the sounds that they make must not lose their importance. Even silence can endure as an expression of self. For humans, a species living within words, words shape our thoughts and conversely our thoughts shape our words. We become trapped within a cycle of meaning and representation, meaning only uncovered if it can be linguistically represented. Just like the circle of the animal's un-meaning – their unrepresentability excluding them from the human realm – humans too seem forever condemned, trapped within the structures by which we are able to apply meaning. We cannot know the truth of anything which exists outside of our linguistic realm. *The Great Silence* reminds human viewers of the violence we carry out in our need to name the world according to our own terms. Yet, at the same time, through its explorations of sound and meaning amongst nonhumans, the film creates a space where we can listen to and even feel some of the voices, vibrations and silences that resound beyond our *Umwelt*. We hear expressions of otherness in their own individual meaning, without any need for linguistic translation.

Spatial Expression

Frans de Waal points out how human speech and bird song are both products of a convergent evolutionary tract, "given that songbirds and humans share at least fifty genes related to vocal learning."[724] Although we often diminish expressions of animal voice, scientific fact challenges such opinions and it is possible to identify amongst other species how voices allow kinship, culture and creativity to develop and evolve, enabling an expression of self that humans have reserved for their own kind. Vinciane Despret opened a talk she gave at Palais de Tokyo in Paris (about Saraceno's spider architectures) in December 2018 quoting cognitive ethologist Mark Bekoff: "Each animal is a way of knowing the world." Despret uses Bekoff's phrase to invite her audience to "think of living beings in terms of 'ways of being'" and gives "a particular meaning to his proposal: *each animal is a way of inhabiting the world.*" Despret explores the songs of territorial birds to provide examples of animal ways of inhabiting space, their engagement with a place in order to make it into a home, their ways of being affected in this home, and the relationships they forge with their

[724] Waal, p.109.

neighbours. She recalls the investigations of composer Bernie Krause who observed how birds "compose *together*", "vocalis[ing their songs] in distinctive kinship to one another" creating a "segmentation of sound niches" and a "division of acoustic bandwidth" meaning songs "rarely overlap. One bird falls silent while others take over and then fall quiet, leaving some others to release their own melody, as if to say, 'it's your turn now.'" According to Despret, as a bird maps its territory in flight, at the same time "the song of the bird becomes/is one with space" or "the song of the bird transforms the space into their own body" thereby transforming space into "an extension of the birds' body."[725] Territory therefore gains a geographical, a musical and an expressive dimension.

Following Giles Deleuze's thinking on *Umwelt* as the "'associated world [of an animal]" Despret locates "territory precisely when milieu components […] cease to be functional to become expressive […] What defines the territory is the emergence of matters of expressions (qualities).'" Self-expression thus takes on a literal meaning, "it is a matter of making a site a place, it is as much about appropriating oneself *to* this place, to make it a self-expression, that is to say, to make it a 'self'". According to Despret:

> Singing, as an extension of the body in space […] creates an invisible web of sound stretched over a space that becomes a place; it organises an interior and an exterior (and it is not impossible that the power of song, its rhythm, determines in part the possible extension of the territory, just as must the possibilities of surveying a certain surface). The song becomes partition, in the double sense of the term, musical and geopolitical.[726]

For Despret sound and song become material extensions of bodies. Like the web of the spider the silkworm's threads or the octopus's arms, birdsong reaches beyond the bird into an example of extended cognition. The animal comes to embody space, inhabiting it beyond the container of its immediate body. Despret goes on to explain how "birds prefer to settle where others have settled" bringing into effect instances of "mimicry." She also emphasises how "many birds continue to sing after mating." The ethologist contradicts science claims that birds only sing to defend their territory – "aggressive functions don't make the territory" but "the territory reorganises the aggressive functions into expressive functions". The "territory creates neighbours and therefore neighbourhood relations […] it is a social device. It is a social organisation that makes neighbours." Birds establish a territory through vocal self-expression, using their song to delineate its space, and in the process enter into social relationships with neighbouring birds. The territory thus becomes what French

[725] Despret, *ON AIR*.
[726] *Ibid.* In her native French, "partition" connotes both a geographical and political division (territory) as in English but has also a musical meaning for a score, often comprising all of the parts of a composition.

philosopher Baptiste Morizot calls "'a conventional device of pacification.'" Despret challenges the human "idea of the territory as private property, as a place of exclusive possession" and so stimulus of conflict and in so doing emphasises the crucial importance of voice in the transformation of a space into a place for songbirds.[727] Sound is not merely an abstract concept without agency, but a specific mode of expression which is absorbed and exuded by animals into a material force.

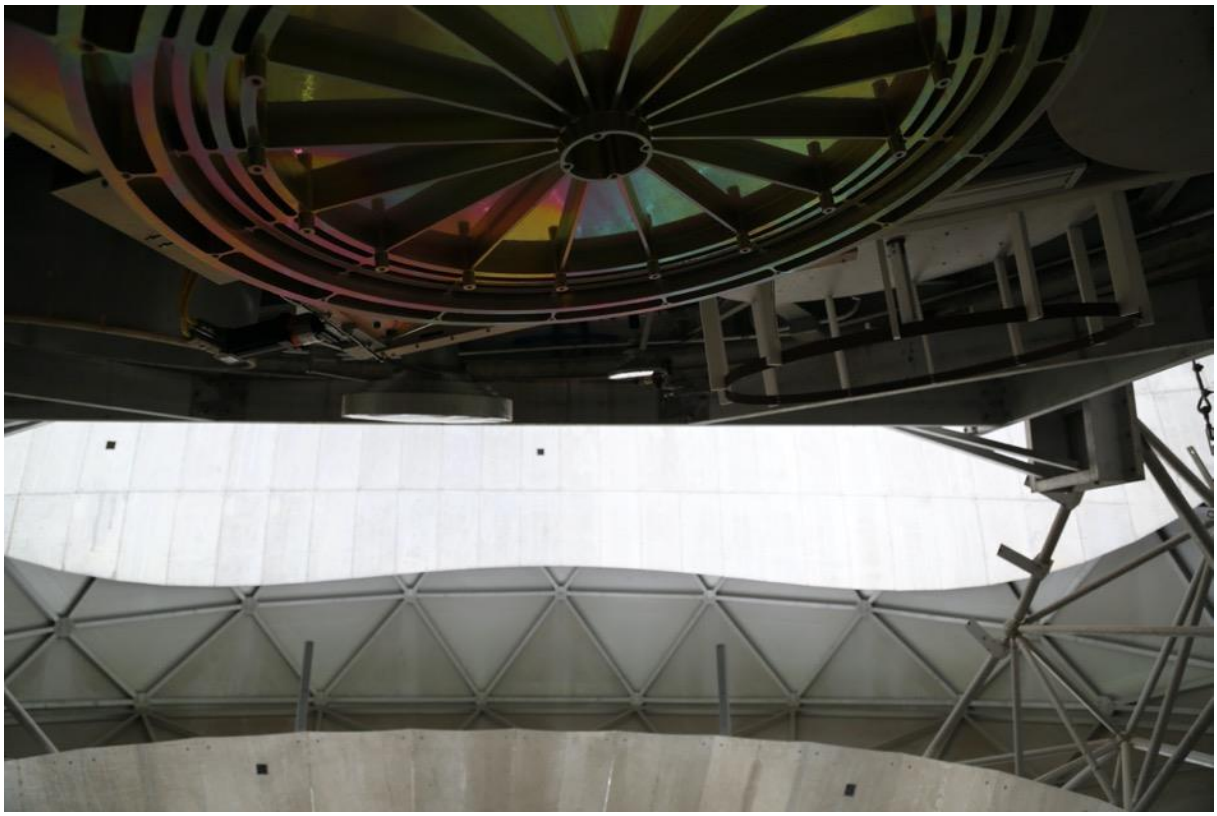

Figure 81: Still from Allora and Calzadilla, *The Great Silence* (2014), courtesy the artists.

Despret's paper traces Haraway's thread of the non-innocence of words, showing how the way humans name behaviours, spaces and other beings often suppress the myriad significations available. The words we use seem to be resignified when applied to nonhumans and their ways life, or perhaps the words we use are just not cut out for the task. Despret draws attention to the poetics and creativity at work in nature as well as the capacities of sound and voice to develop relationships across ways of life, as previously met in Alex the Parrot's poetic attempts at interspecies communication. These capacities of sound are also explored by Allora and Calzadilla in The Great Silence. An attention to the rich detail of the film's location is made audible and perceptible to its viewers. At first, a deep rumbling with interspersed crackling is heard, and only as the camera pans

[727] *Ibid.*

out to reveal the larger form of the observatory can we identify its source as Arecibo. As the frame moves to a shot of the rainforest floor, we hear the songs and calls of birds whom we cannot see. Bird song often audible to us from or homes without a specific vocalist in sight, this is an experience of sound many viewers may find familiar. Positioned deep in the Rio Abajo rainforest, the human viewer is exposed to its musical score and composition as explained by Despret. We hear the different calls cries, songs and tweets moving across the space in harmony with one another, painting an audible picture of the forest. Sound is awarded a materiality which grounds this wild *space* into a *place* – a home – for the diverse forms of life we can hear composing this world together.

The soundscape of Arecibo becomes increasingly complex throughout the film. Different sounds audible at every frame, their specific meanings remain clouded, ungraspable and unintelligible to most unscientific members of the artists' audience. Similarly, we cannot be sure what the calls and songs of the birds express. But what the film does convey is how these nonhumans – avian and mechanical – occupy their own space, territory and home within the microcosm of the film. Allora and Calzadilla place animals and technology in an unusual alliance and in so doing allow us to consider ways of being and speaking that differ from human understandings which posit entities in relationships of difference. The subtitled text which crosses from one scene to the next unites the human, the animal and the machine threading together a space where we can witness and begin to appreciate the significance of the endangered birds and our relationship to them. Hopefully we can begin to recognise our humane capacity to respond and react to the situation made visible and audible in *The Great Silence.*

Figure 82: Still from Allora and Calzadilla, *The Great Silence* (2014), courtesy the artists.

Accommodating Others

Humanity has for centuries elevated its own voice above that of other animals. Aristotle claims that although humans and animals share a voice, they do not share language. The ancient philosopher distinguishes between voice (*phōnḗ)* and speech (*logos)* with speech enabling communicative reason. For him:

> Speech supplies the grounds for inclusion in a just community, a community that can speak *of* justice, because according to the principle of reciprocity, only beings capable of dialogue, of addressing and being addressed, are due justice.[728]

As we see in animal communities, human voice provides relational structures, but in our instance, this is violently mapped as exclusion of all other life from our ethical territory. In his attempts to reorient the relationship between speech and writing, Derrida uses *différance* to stress the ambiguity between two oppositions and to open up possible responses away from prescriptive ones.[729]

Derrida focusses the second part of *Of Grammatology* on the writings of Jean-Jacques Rousseau. For the Enlightenment philosopher, all life emerges from and is organised around, *la voix de la nature*. Passive and passionate, this "animal voice" provides a shared origin for all beings, with only humans progressing from this voice into rational, active, speaking subjects. Although other animals have been observed making "noises or even 'voice', […] they are physiologically barred from rendering these sounds articulate" for Rousseau, explains Lynn Turner.[730] However, Derrida problematises this belief by positing *différance* as the "universal structure" to all life."[731] Through his reading of Rousseau's 'Essay on the Origin of Languages', Derrida interrogates the metaphysical search for an autonomous self, founded on speech as the source of this self-determination. "'[Voice] produces a signifier which *seems* not to fall into the world … It does not fall into the exteriority of

[728] Menely, pp.22-23.
[729] He argues that within philosophical history dating back to Plato and his use of the word *pharmakos* (meaning both poison and cure) speech has always been given priority over writing. Derrida seeks to challenge this hierarchical relationship to instead suggest that the two are in fact completely dependent upon the other and so cannot be distinguished.
[730] Turner, 'Voice', p.520.
[731] *Ibid.*, p.519.

space, into what one *calls* the world, which is nothing but the outside of [the voice].'"[732] Turner quotes Derrida to emphasise how voice has traditionally been understood as the locus of originary meaning for human subjectivity, never in relationship with the space into which it erupts when spoken, thus enabling the supposed autonomy of the human subject. Derrida, however, emphasises the precedence of articulation to voice – articulation meaning not only the pronunciation of something clearly or directly by breaking up words into syllables but also the joining together of internal information with external conditions into systematic interrelation. Voice as a product of articulation therefore becomes dependent on the space of the outside as its condition of possibility.[733]

> [Articulation] becomes that supplementary structure preceding and enabling all communicative forms without being identified with any one thing, or indeed agent in the form of an exceptional species that calls himself man. Articulation [… as] spacing cannot possess a form of its own.[734]

Articulation is the condition of possibility – the supplement – to all means of communication. As a concept, articulation cannot be tied to the 'exceptional' human voice and is instead inherent to the production of any message as a collected chain of symbols that need to be joined in relation to one another. Articulation cannot be established as unique and expressive of any one discrete identity or voice, as it is the universal ability to negotiate the space within and without the self. Articulation as self-expression is always already in relation to that which lies outside the speaking self – be that other life forms or the very environment in which one lives. It becomes the way to understand language as both psychically but also physiologically relational. For Turner, articulation thus becomes a dangerous supplement on which the living – not human beings alone – depend, casting us as receptive but also susceptible and creating a core of shared vulnerability across all life forms.[735]

As forest canopies disappear so do the songs of birds, meanwhile the "marine echo chambers [of cetaceans] shrink under the pressure of antisocial anthropogenic noise."[736] As Earth's

[732] Derrida, *Grammatology,* p.236. Here following Turner, I change Spivak's translation of "*la voix*" from "speech" to "voice." See Turner, 'Voice', p.527.
[733] "Rather than accord with the degenerative timeline that begins with static animality, is then enlivened by passionate human song before falling prey to a calamitous exterior influence, Derrida reposes articulation." Turner, 'Voice', p.528.
[734] *Ibid.*
[735] *Ibid.*, p.521.
[736] *Ibid.,* p.527. Dolphins' use of echolocation is heavily dependent on their surroundings to be able to transmit their messages to their intended recipient. Similar to Despret's analysis of songbirds falling silent to allow

spaces and nonhuman inhabitants rapidly disappear, our ability to relate to what lies outside of us is diminishing drastically. If anthropogenic violence continues at current rates, soon all humans will have left to relate to, and articulate with, will be with ourselves, our domesticates, and our technological prostheses, trapping us in an echo chamber of human meaning. The parrot in *The Great Silence* wisely prophecies this future and her story articulates a reminder for us to acknowledge her kind's – and many others' – abilities. Sounds place us in relation *to*, not distinct *from* the nonhuman world. The parrot's words resonate with Turner's conclusion: to "drop the definite article in acknowledgement that *voices* resound beyond human beings… [thus bringing] us into a commonality characterised not by identity or ability but by vulnerability."[737]

The Great Silence foregrounds the *sounds* of nonhuman voices, whilst human speech remains confined to words running silently across the screen. At the same time, the parrot and her fable assert her capacity to articulate words in our own language – perhaps articulating our own deepest and darkest thoughts – troubling the marker humans use to separate themselves from animals. Her story dually acts as a challenge to human exceptionalism and as a nudge to us to hear other messages and to begin to respect other ways of life, traditions, voices and relationships. Only then might we recognise, feel and be affected by the loss to Earth as a whole as so many individuals and their species slip into silence. *The Great Silence* is microcosmic world vacated of the human subject. In this world, new considerations are allowed to surface as the parrot is aligned with our own human words, imbuing them with a different significance. We see that which is 'proper' to us – technology, language and wisdom – reclaimed by nonhumans. Human characteristics are shown not to be confined only to us through Allora and Calzadilla's creative expression. The film becomes a space where sound is made material – it can be felt. Within this space, we can begin to consider how we might extend our humanity to those we don't call human by recognising that we all share one space where the ability to articulate with others is becoming increasingly vulnerable.

another bird to sing, Turner describes how dolphins "restrict their own use of echolocation and effectively 'eavesdrop' on each others' such usage in order 'to avoid potential signal jamming' (something that implies both cooperation and the potential for its abuse.)" p.527.

[737] *Ibid.*, p.528.

Figure 83: Still from Allora and Calzadilla, *The Great Silence* (2014), courtesy the artists.

Speaking for an Other

The subtitled text in *The Great Silence* creates a paradoxical effect. It may come as no surprise to human viewers watching this film that these are the words of the parrot herself, a species famed for vocal (mimicry) abilities. However, this technique also raises questions about the significance of speaking for an other, in this case an other who has proven to be able to speak for herself, in our own language no less. Philosopher Alison Suen writes of the complexities of speaking for animals – specifically within animal rights discourse – in her book *The Speaking Animal: Ethics, Language and the Human-Animal Divide*. She at first critiques the human tendency to speak for our animal kin, contaminating "their voice" with human interests.[738] For Suen this only serves to perpetuate the human-animal divide – one firmly based on linguistic exceptionalism in humans – emphasising only the values that we deem important. By failing to think on animals' own terms, instead ascribing to them a call for rights equal to those of humans, animal advocates commit further violence by silencing the already silenced.[739] Suen draws upon discussions around feminist and racial minority rights to develop her argument, describing how "the very act of speaking for animals can be a confirmation of our dominion over them."[740] However, she also acknowledges the importance of mediation and representation in animal advocacy, raising the point that a distinction

[738] Suen, p.159.
[739] *Ibid.,* pp.20-28.
[740] Suen mentions specifically Gayatri Chakravarty Spivak and her argument that the intellectual's representation of the subaltern obscures their voice, as well as Linda Alcoff who cautions against the impetus to speak for others as this is often "born of a desire for mastery", p.31.

must be made between a "women's solution" and an "animal's solution" when speaking for these different identity groups.[741]

Suen's point is that we cannot lump these marginalised identities into one example. Although attention must be paid to the interconnectedness of the battles to be fought, just as much attention must also be paid to the very real differences between these struggles for rights, equality, respect and care. "At stake" for Suen "is not whether animals can speak, but whether *we* can understand them when they speak" and "'what it will take to learn the answer.'"[742] Instead of continuing to ask questions about their capacity to speak (or suffer, or deceive, or use tools) we might instead re-orient our thinking towards listening carefully. Just as Lynn Turner calls for a recognition of the plurality of voices to be heard across the globe, Suen states that "to let animals 'speak' we must reconceptualise and broaden the meaning of 'speaking' to include a plurality of ways to speak."[743] Rather than language being used to divide humans from animals, an account of language "that is grounded in our social, relational capacity" is needed and by reinterpreting "the uniqueness of our identity as the speaking animal […] we can properly take on our responsibility to speak for those who lack a voice."[744] Rather than speaking over animals and their silences, untranslatable voices, or indeed their human mimicry, our response-ability as humans with powers for change lies in helping these others – who have for so long been ruthlessly silenced – to articulate their own voices through imagination and kinship.

Allora and Calzadilla's film juggles with both the impossibility and inevitability of interspecies translation and attempts two methods of giving voice to silenced nonhuman others. The film's visual sequence moves across the Rio Abajo rainforest, capturing scenes of the *Amazona vittata* parrots in their natural habitat, granting this almost forgotten and invisible species a presence on screen. The film engages with biosemiotics, amplifying the sounds and vibrations of the forest canopy to convey signs and significations that can be found across the natural world. The film's audio too makes room for the parrots' calls and songs to convey their vocal relationships to other life in the rainforest. A species seriously threatened with extinction, this glimmer of wildlife on screen is an image few have the chance to encounter. The up-close shots of the parrots' delicate feathers and unusual flight path paints a picture of a specific way of life many of us are not privy to.[745] The film serves as a visual reminder of the unique importance of this particular bird on our planet.

[741] *Ibid.,* pp.32 and 36. One could think back to my arguments around the alliance of women and nature in chapter two.
[742] *Ibid.*, p.33.
[743] *Ibid.*
[744] *Ibid.*, p.11.
[745] Upon taking flight, its colour pattern provides some contrast to the forest. The flight mechanism of this species is similar to the one found in other *amazons*, and involves strokes below the body axis, unlike most birds whose wings flow above their bodies in flight. 'The Puerto Rican amazon', *Wikipedia.*

At the same time, we read the script told from one parrot's perspective. This message is a poignant and audible reminder of both our sensitivity to the world around us, and our ruthless appropriation of it. The parrot's closing words present the fact that this critically endangered species is on the brink of extinction and it is only humans who can prevent this tragic loss. Although Allora and Calzadilla could be criticised for putting human words in this parrot's mouth, their artistic techniques for me defy the violence of anthropomorphic advocation. Parrots possess a capacity for speech but who is to say the human words they might use could convey the tragedy and loss of their current situation? The film is not a call for animal rights nor a total condemnation of humankind. It is instead an appeal to our connection with these birds, one based on the beauties of voice. The parrot's written script does not seek to equate her capacities for vocalisation with humanity's supposed *logos* and reason. She instead emphasises the relational capacities of language, how we so often form relationships with others through sounds and songs. Suen writes: "We speak not because we are rational but *social* beings."[746] The parrot draws attention to the contact calls her kind and ours both use to communicate with others. Her speech conveys the similarities and differences between human and nonhuman languages: voices may not speak the same words, but the relational intent remains the same.

The importance of Allora and Calzadilla's work lies not in the fact that they ventriloquise and advocate for another species, recounting their interpretation of her story. It lies in how they emphasise the relational capacities of languages – human and not, via the film's impressive soundscape – and how it is employed across all forms of life to weave connections and relationships with others. Allora and Calzadilla assume a bold position in speaking for this parrot, yet the message comes with no pretence of authenticity. Instead this speaking for an other is a crucial message between humans, voiced through the poetic *medium* of a film and fable which retains strong elements of truth, about our connections with others and the need to recognise this in a time when so many of these others face extinction.

The video work does not tell a whole story nor complete picture, but rather leaves questions unanswered and conclusions unreached. It is up to our imaginations to fill in the gaps. What might the future hold for either species? Only this way, assigning some control and degree of imagination to the viewer, can a motivator for action be reached. Instead of using the words of science or the media, Allora and Calzadilla allow a creature directly affected by human action to retell to us what we already know. And in the process the parrot is allowed to affect her viewers and listeners, in ways not normally possible. The parrot narrator expresses thoughts lying in the deepest darkest depths of our subconscious – a voice we normally drown out in our quest for peace of mind – about

[746] Suen, p.120.

our simultaneous interconnection and threat to nonhuman life. *The Great Silence* resonates with a plurality of voices normally outside of human audibility and at the same time allows its viewers to imagine the silences that will be left if these voices are lost forever in the wake of anthropogenic imposition on the world. As the sounds from the film amplify, surrounding the viewer from all sides so they can feel the vibrations, the shared affinity the parrot's words have been trying to convey gain power and resonance. Allora and Calzadilla's careful composition of sound, speech and silence creates a space where we become sense-able to our interconnections with the world and so response-able. We can watch and listen within this space and so consider how we might begin to extend our most humane capacities to those we have traditionally named other.

Afterword

We are living in a time of ecological collapse and multispecies extinctions. I believe that one of the greatest steps humanity could make towards beginning to solve this environmental disaster is by changing the way they relate to (nonhuman) otherness. This research looks at examples found in the animal kingdom which go against the binaries and hierarchies humans typically impose. I have explored the role that art has to play in inviting reconsideration of the human-animal relationship, and I argue that through its obvious reframings and mediations, art becomes one of the most powerful means to represent animal ways of being. This is not because art is the most accurate or encompassing mode of representation. Rather, I argue that art's artificiality reminds human viewers of the unavoidable projections and mistranslations they make when viewing examples of otherness. Art serves to remind humans of the tight hold language holds over our view of the world, and how this tool we have – one we ruthlessly use to define ourselves above and against all other species – paradoxically delimits our understandings of other ways of life. In its representation of animals, artistic practice can employ a range of perspectives and modes of looking and displaying which remind us of the multiplicitous experience of life in our contemporary world. Perhaps these animals might inspire ways of relating to otherness not based upon binaries, oppositions and hierarchies but instead upon multiplicity, fluidity, transformation and tentacularity. As Donna Haraway argues, we are all chimeras and it is no longer possible to extricate different lifeforms from any others. The artworks chosen here all demonstrate how animality, humanity and technicity have evolved and constantly interact with one another, creating cyborgian bodies of impossible possibilities.

In a similar way, the tentacular form and structure of this dissertation combines a range of perspectives, approaches, arguments and conclusions so as to suggest that no one argument or position should dominate our understanding of other life. Through my creative writing style, I have encompassed scientific fact with theoretical speculation and fantastical imaginations. These essays are not about painting a complete picture or making an informed contribution to scientific study. Rather, they are tentative suggestions and hesitant encounters with some of the creepiest and most other of life. I chose these animals *for* their very otherness, their repulsiveness, their creepiness and their complete non-relate-ableness, and the artistic representations analysed here amplify this. I hope my readers are left in a position of reflection and awe rather than understanding and knowledge after their challenging encounter with these animals, their bodies and their processes which totally challenge and invert everything humans like to tell themselves about the world.

Ethical issues do remain about the practice of using animals in artworks. Despite the positive intentions of artists such as Pierre Huyghe and Tomás Saraceno, the nonhuman creatures included in

their practices are there against their will and will not receive any benefit for their participation. Within this thesis, I did overlook this issue so as to be able to explore real life contemporary representations of animals in artwork so as to consider what these representations might contribute during our time of ecological collapse and total separation of ourselves from the animal kingdom. And despite their exploitation of animal life, I find these artistic representations successful on some levels, by reminding human viewers that animal do not exist only for us, demonstrating to us the different processes and ways of being animals exhibit when left to their own devices. The artistic framing of these ways of being remains an issue however and is something I would like to move beyond as this project develops. Now perhaps this research could move forward to begin considering the role that artistic practice has to play in changing or informing the human-animal relationship without the inclusion of live animals. How could art imagine or represent the changes required to how humans relate to otherness, representing alternative possibilities inspired by animals themselves, without exploiting animal bodes to do so? This is something I myself have tried to achieve through my writing style. How can artistic practice demonstrate to us the beauty and wonder of animal ways of life without artificially framing other species to do so? These questions remain open for exploration in future research.

Diving into the worlds of these animals and their artists has been an exciting and fascinating journey. I have been able to take the time to learn about the capacities of other species – capacities we humans *lack* – which has stretched my imagination and filled me with respect and admiration for the nonhuman world. Viewing this world through the three frames of artistic practice, scientific fact and theoretical discussion has enabled me to establish my own unique position within the field of Critical Animal Studies, and as well, allowed me a distance from which I have been able to scrutinise fundamental aspects of my own world and species *Homo sapiens.* Only by looking outside of my own frames of reference and becoming intimate with the flesh of others have I been able to challenge and reformulate my understandings of relationality and become aware of just how small the human world really is. I have struggled with the constraints of words, often unable to do justice to the wealth of differences found outside of our own rational sphere. Animal worlds are well and truly unrational, challenging so many human idea(l)s about personhood, property, language, knowledge and crucially, relating to otherness. I do not think humans need to start modelling their behaviour on what they observe in the animal kingdom. But what these species emphasise is that the moulds humans carve onto the world are most certainly not the only ones available. The radicality of these other species can encourage us to explore alternative ways of being in the world less violently and *with otherness*.

The downside to my research is that I have acquired knowledges and understandings about the complexities and sensitivities of nonhuman life. With this has come an acute difficulty to accept our increasingly *human* world within which so many species are denied a response, a respect, or even the right to just be. In the summer of 2019, the Amazon rainforest made headlines as it was increasingly ravaged by illegal forest fires. These were a consequence of relaxed legislation around the rainforest's protection, largely to satisfy the insatiable demands of capitalism for growth, productivity and profit. The media, for a couple of days at least, was full of stories condemning the political regime that had enabled or encouraged these fires to start. The Western world was concerned, recognising this decimation of our planet's lungs to have drastic impacts for us humans, specifically concerning biodiversity and global warming. Yet this condemnation sits uneasily with me. Us in the Global West are the ones who have most greatly contributed to the climate crisis, in our expansion and growth towards the wealth we now have and our current prerogative to spend this wealth at all costs. Yet we now condemn those in the Global East as they themselves strive for the same quality of life that we have, and so fail to provide a sufficient bandage for the wounds we have inflicted on the planet. These post-Colonial imbalances need to be addressed as we move into increasing ecological and climate danger.

The remorse I felt at this time was not only for the damage to the Amazon's ecosystem and the inevitable impacts that will extend to humanity. I grieved for the animals who are drowning in pollution, those being left without a home or their families and being mercilessly burnt alive within these fires. I tried to broach this topic with some friends of mine, but it seemed alarmingly impossible for anyone to be able to reach beyond their framing of this disaster as a catastrophe for biodiversity and global warming – that is, for humans. Animals have for millennia been considered irrelevant, lesser beings existing on earth only for human use, our opposites to tell us who we are. But what this research has enforced upon me is that animals live in their own worlds. They exist for themselves. They are beings in themselves. They may be mute or unable to build cities or computers, but that does not mean that they do not feel, they do not think, they do not relate or that they do not have a right to be alive. Theirs is an existence of innocence – absent of the prejudices and rules we enforce upon our own – and that makes their suffering in human hands even more tragic.

My view of the world has been enhanced by my research. I have been exposed to the mysteries of animal life and these have filled me with joy and astonishment. Yet at the same time, what is going on in the realities of human life is making me increasingly anxious. The political ideologies of Bolsonaro, Brexit and Trump, to name just a few, reek of xenophobia. The fear of the other is rife in our society. This extends beyond anthropocentric speciesism to hostilities within our

own humankind, be those concerning race, gender, sexuality, financial status or physical ability. It is for this reason that I think this project, although immediately focussed upon animals, can have further reaching implications. I argue that the human relationship to otherness, one currently based upon violent binaries resulting in the sacrifice of that which is different, must be changed. I consider ways to move beyond such relationships envisioned in art: contemplating an octopus alongside psychoanalysis, comparing the dangerous eroticism of women and insects, listening to the moralising words of a parrot, resonating with the situated knowledges of spiders and witnessing multispecies ecosystems wrought with (in)difference. The chapters presented here each provide a speculative example for encountering otherness with a more open mind. I hope human readers are as allured as I have been whilst being reminded of their insurmountable alienation from everything that the human is not. In this way these examples provide food for thought that humanity is not the measure of all things, but also as to how we can begin to re-apply and reconfigure our most *humane* capacities. We are a unique species with astounding capabilities. We are able to reflect upon and adapt our behaviours in ways that most other species cannot. The chance of change lies firmly in our hands.

I hope my writing brings its readers into solidarity with the species featuring here. And upon entry into this solidarity, where surprising differences *and* similarities materialise, a space for contemplation beyond prescribed understandings might be entered. We humans share our home with a wealth of life and as ecological crisis looms, shared precarity, vulnerability and fragility are what unites us all. We need to accept this situation as one that ties us more closely to the lives of others – not further apart – and find a way to move forward together. The power of art to make the impossible possible, to stretch our imaginations and reach beyond traditional limits is why I continue to firmly believe that it is the most powerful medium to bring about social and political change. Art becomes a way to envision and reposition the radical thinking of Jacques Lacan, Xenofeminism, Donna J. Haraway, Jacques Derrida, Roger Caillois, Jakob von Uexküll, N. Katherine Hayles and the many others unpacked in this project. Through creative speculation and exploration, artistic practice reminds us that although the opposite of rationality is irrationality, that does not mean that there is not something else about animals that reaches beyond what we can think as humans.

Right now, it feels as though the way humans view and relate to the world around them will always be governed by capitalist supremacy. But art allows the materialisation of spaces existing outside of these institutions. Art allows us (partial) entry into the unrational spaces of animal worlds, worlds which hold no regard for human limitations. The animals and their artists given centre stage in my project, I hope, can remind us that change is possible, even if the journey seems the most illogical or nonsensical of all. A subversion of human principles – patriarchism, anthropocentrism,

neo-liberalism and capitalism – seems to me a more possible or logical – not to mention appealable – route than a world left decimated and absent of life except for those we deem proper to us. A world without animals and the values they contribute to me is not only lifeless, it is unimaginable. A radical empathy, response and hospitality for our most radical *xenos* must be extended if we are to prevent the subtle slide into a world created by and for only us. I hope this work provides a step in making the alternative, the more dangerous and challenging route, a radical possibility.

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