antennae

THE JOURNAL OF NATURE IN VISUAL CULTURE
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remaking nature

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THE JOURNAL OF NATURE IN VISUAL CULTURE
edited by Giovanni Aloi

Antennae (founded in 2006) is the international, peer reviewed, academic journal on the subject of nature in contemporary art. Its format and contents are inspired by the concepts of 'knowledge transfer' and 'widening participation'. Three times a year, the Journal brings academic knowledge within a broader arena, one including practitioners and a readership that may not regularly engage in academic discussion. Ultimately, *Antennae* encourages communication and crossovers of knowledge amongst artists, scientists, scholars, activists, curators, and students. In January 2009, the establishment of *Antennae*'s Senior Academic Board, Advisory Board, and Network of Global Contributors has affirmed the journal as an indispensable research tool for the subject of environmental and nature studies. Contact the Editor in Chief at: antennaeproject@gmail.com Visit our website for more info and past issues: www.antennae.org.uk

Front cover: Alexandre Isidore Leroy de Barde (1777-1828), *Birds*, first half of 19th century. Gouache and watercolor
Musée du Louvre, Paris
Back cover: Alexandre-Isidore Leroy de Barde (1777-1828), *Crystallized Minerals,*, first half of 19th century. Watercolor and gouache on heavy paper. Musée du Louvre, Paris.
Theme page: Ernst Heckel, plate from *Kunstformen der Natur,* 1904

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Right: Adolphe Millot, *Papillons*, 1910, Public domain

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LAROUSSE POUR TOUS.

editorial

Giovanni Aloi

Allora and Calzadilla's video installation, *The Great Silence* (2014) juxtaposes images of the world's largest radio telescope, located in Esperanza, Puerto Rico, with imagery of a critically endangered species of parrots, *Amazona vittata,* that lives in the area. The artists collaborated with science fiction author Ted Chiang, who wrote an original monolog for a parrot pondering over the irreducible gaps between living and non-living, human, animal, technological, and cosmic actors.

"Parrots are vocal learners: we can learn to make new sounds after we've heard them. It's an ability that few animals possess. A dog may understand dozens of commands, but it will never do anything but bark. Humans are vocal learners too. We have that in common. So, humans and parrots share a special relationship with sound. We don't simply cry out. We pronounce. We enunciate.

Perhaps that's why humans built Arecibo the way they did. A receiver doesn't have to be a transmitter, but Arecibo is both. It's an ear for listening, and a mouth for speaking.

Humans have lived alongside parrots for thousands of years, and only recently they considered the possibility that we might be intelligent. I suppose I can't blame them. We parrots used to think humans weren't very bright. It's hard to make sense of behavior that's so different from your own".

In its disarmingly straightforward narrative, *The Great Silence* finds the power to challenge the very structures that have supported scientific thinking over the past five hundred years. All the pomp and hubris that have characterized our quest for knowledge are made to crumble in a sixteen minutes video through which a parrot puts us to shame as it simply reveals the paradoxes and contradictions that make us human. Our language, which has been improperly used to separate and elevate us from other animals is turned against us.

"The humans use Arecibo to look for extraterrestrial intelligence" says the parrot. "Their desire to make a connection is so strong that they've created an ear capable of hearing across the universe. But I and my fellow parrots are right here. Why aren't they interested in listening to our voices?" From the very start, Ted Chiang's monolog points at our inability to hear and see the complexity and intelligence of the fellow creatures that surround us. It exposes the scale of our absurd investments in colossal technological feats that may never yield meaningful results. Meanwhile, we remain deaf to the voices of animals and plants close at hand, blind to magnificence their non-human intelligence. We talk of their cognitive abilities as instinct — a quick way to swat aside their wit, retain our superiority, and implicitly cast them as Cartesian machines unaware of the bodies they inhabit.

Silence permeates the parrot's monolog; it is woven through the bird's voice just as much as it permeates the footage of Arecibo. Juxtaposed to the cacophony of bird voices that populate the lush footage of the forest, the telescope's mechanical humming eventually become deafeningly silent. This, simultaneously becomes the silence of outer space, the silence of our existentialist loneliness, and that of the extinctions we are causing. Silence is our blindness, our inability to hear the call of other animals and to see ourselves as part of a world we once belonged to. The silence explored by Allora and Calzadilla, ultimately is a monument to our arrogance.

It is perhaps not coincidental that silence has also historically defined the study of nature itself. Taxonomy, the masterplan of early natural history, privileged sight in the juxtaposition and organization of the natural world. At a time when photography had not yet been invented, illustration reproduced a stilled and muted rendition of nature. Taxidermy also silenced animal voices from the chattering and murmuring of forests, prairies, and tundra. It turned animals into sublime sculptures: devotional effigies of our existential loneliness.

The past twenty years have seen many contemporary artists, curators, and scholars grapple with the cultural complexity of natural history, the enormous amount of knowledge that it has produced and the undeniable colonialist ties. But the limitations it has imposed on our ability to think about animals and plants have also been prominently addressed. Those who have seriously engaged with natural history in their practices know too well that one of the problems of our relationship with nature is that we ask the wrong questions and search in the wrong places. For too long we have understood animals and plants as tokens of a masterplan. At this point, it is clear that our interest in the natural world should not be motivated by a desperate search for the meaning and origin of life, it should not be satisfied with seeing reflections of ourselves everywhere we look, and neither should it stem from a desire to explore and colonize.

Contemporary artists, curators, and scholars who engage with natural history methodologies, imagery, and narratives well know how powerful these are in shaping our perception of the world and our actions towards it. Postcolonial critique and deconstruction have provided us with the necessary tools to identify the ideologies, strategies, and rhetoric behind the idea of nature itself. Ever since, contemporary artists have been at the forefront of the important task of remaking nature: to reconfigure our old disciplinary attitudes towards animals and plants into a non-anthropocentric and experimentally charged thinking environment.

At stake, at this moment in time, is the possibility to enthuse large audiences about nature. To make more and more people actively participate in scientific discourses and experiences that can lead to a genuine interest in the natural world as something of intrinsic and essential value not just to us, but to this planet. The conundrum is the same faced by natural historians during the 19th century: how can we make people care for the natural world so that they might invest in its preservation. Back then, their answer was to kill more animals to build gorgeous, and very silent, dioramas. Today, working with historians and scientists, artists propose many different answers to the same question but also search for innovative ways in which to celebrate biodiversity and promote new conceptions of the natural world at a time of unprecedented environmental crisis.

This critical reappraisal was central to *Making Nature: How We See Animals* the exhibition curated by Honor Beddard at Wellcome Collection in London between the 1st of December 2016 and the 21st of May 2017. Wellcome Collection is a free museum and library that aims to challenge how we all think and feel about health. *Making Nature* explored how we think about other animals as central to our understanding of ourselves, our place in the world, and the consequences of this for the health of the planet and its inhabitants.

This issue of *Antennae* is part of a project informed by the exhibition *Making Nature* and, like the previous, is co-edited with Honor Beddard, who curated it. This installment, *Remaking Nature,* focuses on the work of contemporary artists whose practice reveals the constructedness of nature as a concept to map and untangle important, and yet overlooked, junctions in our coevolutional histories with the rest of the natural world. This outlook should not be misinterpreted as an attempt to diminish the epistemic importance of natural history but as a desire to reach deeper into the discipline's productive core and devise new multidisciplinarities of natural histories for the twenty-first century.

Many thanks to Honor Beddard, Wellcome Collection, all the contributors, and everyone involved in the making of this issue.

This also happens to be the 50th issue of *Antennae* – a landmark for us. I'd like to extend my gratitude and thanks to all the researchers, readers, students, scholars, and artists who have actively contributed to the journal and who share our work far and wide.

Giovanni Aloi
Editor in Chief of AntennaeProject

Allora and Calzadilla

The Great Silence. Three-channel HD video installation. Dimensions variable. 16 minutes 22 seconds (A&C140007). 2014. © Allora & Calzadilla; Courtesy Lisson Gallery. Photography by Carlos Avedano

Making Nature

Making Nature *was a year-long programme of exhibitions and events at Wellcome Collection, London, that considered our relationship with the natural world. It began in 2016 with an exhibition examining human-animal relations through the practices and institutions of natural history. Wellcome Collection's multidisciplinary approach brought together scientific specimens and research (from the 17th century to the present day) with literature, archival material and artefacts, as well as objects from popular culture, such as toys and games. Displayed throughout the exhibition were the works of 9 contemporary artists featured in this portfolio. Each artwork offered a different perspective on the complexities of human/non-human animal relationships. They allowed the visitor to sit amongst the contradictions that define these relationships and quietly dismantled pre-conceived and unconscious assumptions.*

Honor Beddard, curator of *Making Nature.*

herman de vries

from earth. Earth rubbings on paper. 2015. Courtesy herman de vries. Photograph by Steven Pocock/Wellcome Collection.

de vries trained as a botanist but since the 1950s has been making art about humankind's relationship with the natural world. Much of his work explores the difficulties of objectively describing, categorising and representing plants and animals. In these rubbings, the soil is impressed into the paper, creating a direct relationship between the raw material of nature and its representation.

Richard Ross

British Museum, Natural History, London, England 1985. Digital photograph. 1985 © Richard Ross

In his Museology series, Ross documents the displays and behind-the-scenes activity of natural history museums. His photographs dwell on the surreal and unnatural quality of these exhibits, breaking the sense of illusion on which the museum spectacle relies.

Edwina Ashton

Moth. Video, 4:42 mins. 2002 © Edwina Ashton

In her videos, drawings, and performances Ashton explores the complexities and politics of representing other animals. Dressed in a giant homemade moth costume, she moves around a domestic interior while a voiceover reads from Moths, one of the Collins New Naturalist series of amateur natural history texts. These generic scientific descriptions contrast with the idiosyncratic behaviour of the giant insect on screen.

Allora and Calzadilla

The Great Silence, 2014.

Three-channel HD video installation, 16:22 mins.

Text by Ted Chiang © Allora & Calzadilla; Courtesy Lisson Gallery

The artists pair footage of a sanctuary of endangered Puerto Rican parrots with that of the Arecibo Observatory, also in Puerto Rico. The Observatory's transmitter is used to broadcast messages into outer space in search of extra- terrestrial intelligence. The accompanying text, written from the perspective of the parrots, highlights the importance of listening as well as looking.

Left Top: Phillip Warnell

Phillip Warnell. Ming of Harlem: Twenty One Storeys in the Air. Two-screen video installation, 36:21 mins and 25:12 mins (looped). 2014/16. © Phillip Warnell.

Warnell's installation explores the true story of Antoine Yates, who lived in a high-rise New York apartment with a tiger called Ming and a large alligator. On the smaller screen, Yates reflects on his experience of living in close proximity to the large predators, while the projection is a meditative study of the animals themselves.

Left Below: Hiroshi Sugimoto

Galapagos, 1980. Gelatin silver print, Edition of 25: 13 x 23-1/8 in. / 32.9 x 58.6 cm. Edition of 5: 47 x 83 in. / 119.4 x 210.8 cm Courtesy of the artist and Marian Goodman Gallery © Hiroshi Sugimoto

Sugimoto began photographing museum dioramas in 1974. After studying pictures of the original location, he then re-photographs the museum diorama based on these images. By removing all signs of the diorama's creation, such as the frame or the reflections on the glass, Sugimoto creates an illusion of reality equal to that of the display itself.

Page 22: Richard Pell

Top: *Polynesian rat, Rattus exulans, specimen collected from Bikini Atoll, 8 March 1946,* from the series *Atomic Age Rodents.* Photograph. 2011 © Richard Pell and the Centre for PostNatural History

Below: *Brown rat, Rattus norvegicus, specimen collected from Nagasaki, Japan, 2 October 1945,* from the series *Atomic Age Rodents*. Photograph. 2011 © Richard Pell and the Centre for PostNatural History

The specimens in the Rodent collection of The Smithsonian Institution's National Museum of Natural History are sorted by the location in which they were collected. During a research fellowship, Richard Pell, curator of the Center for PostNatural History, noticed a bias towards locations where the United

Page 23: Jeorge Luis Bordes and Abbas Akhavan

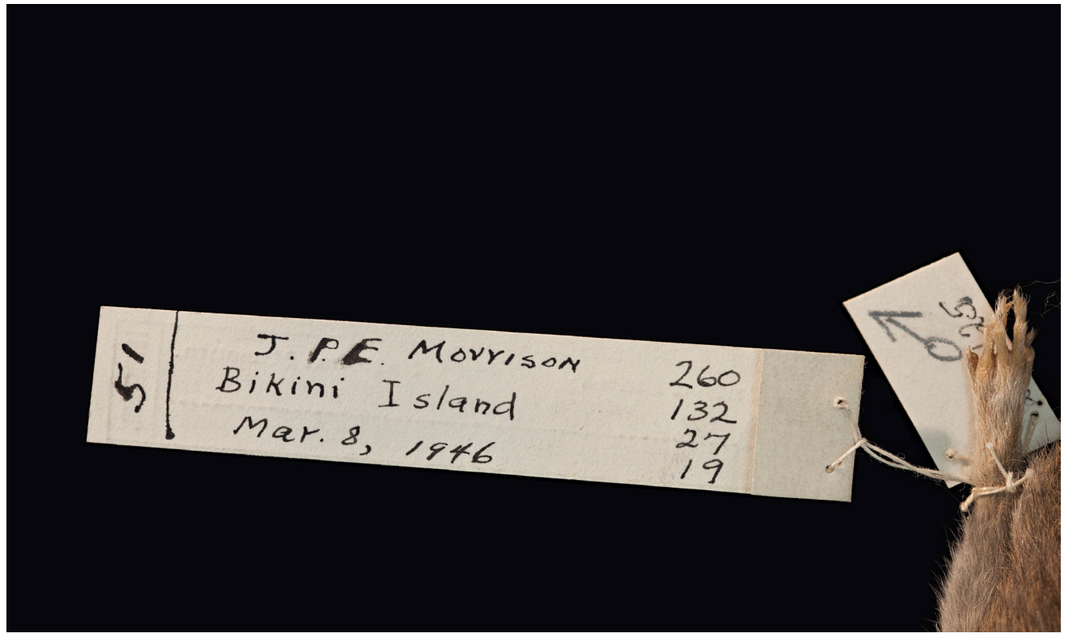
In and above display cabinet: Extract from *El idioma analitico de John Wilkins (The analytical language of John Wilkins),* from *Other Inquisitions* (1937–1952). First published 1952. Below the display cabinet: Abbas Akhavan, *Fatigues. Taxidermy red fox, kestrel, wild boar, mountain hare, European badger, barn owl, red deer, song thrush, etcetera.* Produced by ethical taxidermist, Jazmine Miles-Long. 2014/16. Courtesy Abbas Akhavan. Photograph by Michael Bowles © Abbas Akhavan and Wellcome Center

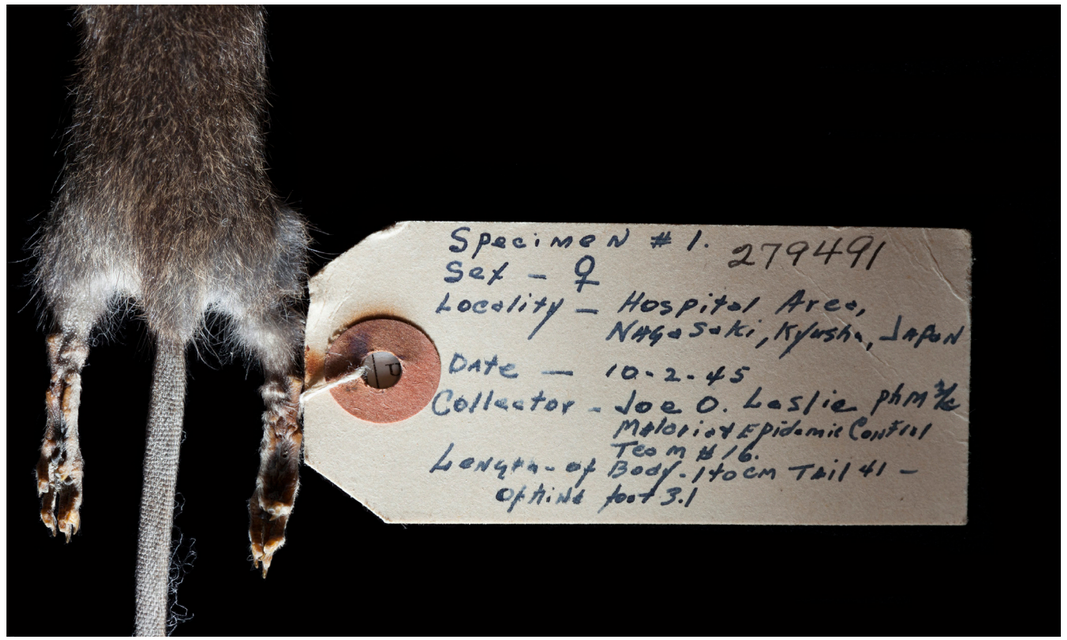
In his essay Borges references a (fictitious) Chinese encyclopedia that classifies animals using the 14 categories listed here. He concludes that "it is clear that there is no classification of the Universe not being arbitrary and full of conjectures".

Page 24-25: Marcus Coates in collaboration with primatologist Volker Sommer

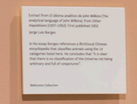
Degreecoordinates. Shared Traits of the Hominini Apes (Humans, Bonobos and Chimpanzees). Vinyl lettering on wall. 2015. Courtesy Marcus Coates / Commissioned by Haus der Kulturen der Welt, Berlin, for Ape Culture 2015. Kate MacGarry, London and Workplace Gallery, UK. Photograph by Michael Bowles.

This work presents questions about our anatomy and behaviour. Since identical answers are possible for all members of the Hominini 'tribe' of apes (humans, bonobos, chimpanzees), they do not define differences between these species. Instead, responses reveal our cultural boundaries, which we share with some individuals but not others – whether human, bonobo or chimpanzee.





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


Extract from El idioma analítico de John Wilkins (The analytical language of John Wilkins), from Otras inquisiciones (1937–1952). First published 1952
Jorge Luis Borges

In his essay, Borges references a fictitious Chinese encyclopedia that classifies animals using this or analogous lexical items. He concludes that, "It is clear that there is no classification of the Universe not being arbitrary and full of conjectures."

Wellcome Collection

Do you like the taste of sugar?

Do you have homosexual sex?

Do you get apprehensive?

Is the dental formula for each quadrant of your mouth: 2 incisors, 1 canine, 2 premolars, 3 molars?

Can you perform acrobatics?

Do you keep tools for future use?

Do you have abstract thoughts?

Do you use sex toys?

(Male) Does your scrotum hang freely?

Can you wade in water?

(Male) Can you be sure you are the father of your children?

Do you pout?

Do you anticipate social repercussions for yourself and others?

Are you adopted?

Are you promiscuous?

Does your eye have a bony socket enclosing it?

Can you walk on all fours?

Are you affectionate?

Do you feel compassion?

Do you like to watch the sunset?

Do you make representational art?

Can you walk on two feet?

Are you agreeable?

Do you form concepts?

Do you use sex for appeasement?

Does your brain have two halves?

Do you bare your teeth as an aggressive gesture?

Do you break alliances between others for your own gain?

Do you have food-related sex?

Do you eat roots?

Do you have a concept of self?

Do you have sex for pleasure?

Do you catch colds?

Do you make your bed?

Do you get angry?

Do you have a creative imagination?

Do you eat soil?

Do you have collarbones?

Do you offer an open hand when begging?

Do you annoy others?

Do you get sad?

Can you run?

Do you appease others?

Do you ever fear the unknown?

Can your shoulder rotate 360 degrees?

Do you anticipate?

Can you stand upright?

Do you get coughs?

Would you bite as an aggressive/defensive act?

Do you have an aversion to things that in the past have scared you?

Do you teach others?

Might you develop cancer?

Do you care for your body?

Do you use touch to bond with others?

Are you aggressive?

Do you play on your own?

Have you ever had diarrhoea?

Do you communicate with gestures and voice?

Do you help others?

Are you friendly?

Can you scream?

Does the colour of your face differ from that of others?

Do you resolve conflicts using sex?

Do you live cooperatively in a group?

Do you have a sense of fairness?

Do you solicit sex?

Is your face unique?

Do you eat your own excrement?

Do you use toys?

Do you get frustrated?

Do you stroke others?

(Female) Do you orgasm?

Do you eat people?

Can you generalise?

Do you get fungal infections?

Do you show your dominance of others by charging at them?

Do you use courtship?

Are you generous?

Do you use hammers?

Are your eyes at the front of your face?

Do you chuckle?

Do you vocally express your pleasure during sex?

Do you create new rituals?

Do you feel joy?

Do you bully?

Do you use cooperative hunting skills?

Do you participate in cultural traditions?

Do you help others?

Do you scavenge for food?

Does your skin have hair on it?

Do you help members of other species?

Do you enjoy community?

Are you hostile?

Do you get haemorrhoids?

Do you drink urine?

Are you hygienic?

Do you itch?

Do you have heterosexual sex?

Do you cry?

Is there someone you admired and 'followed' in adolescence?

Do you have imaginative play?

Do you scream during sex?

Do you get hiccoughs?

Do you drum?

Do you have friends?

Do you throw your excrement?

Do you use sex as aggression?

Do you understand the relationship between things?

Do you sustain eye contact?

Do you lack an external tail?

Do you hug?

Is your group territorial?

Are you inventive?

Do you eat your vomit?

(Female) Can you lactate?

Are your cognitive abilities impaired because you were deprived of social contact during childhood?

Do you throw rocks?

Do you feel jealousy?

Can you use a bottle opener?

Do you laugh?

(Female) Do you ever yawn or self-groom during sex?

Do you prefer to use one hand more than the other?

Do you initiate reconciliation after a conflict?

Can you get malaria?

Do you gather food?

Do you live in a community?

Do you feel lethargy?

Do you whimper?

(Male) Are your testicles much larger than those of a gorilla?

Do you like fruit?

Did you have a long childhood compared to other mammals?

Are you opportunistic?

(Male) Will you go bald with age?

Do you predict consequences?

Do you participate in warfare?

(Female) Do you menstruate?

Do you demonstrate impulsive tendencies?

Do you feel passion?

Are you preoccupied with hierarchy and status?

(Female) Might you have a miscarriage if pregnant?

Do you share food?

Do you feel love?

Are you rational?

Do you eat meat and plants?

(Male) Can you make a flicking movement with your erect penis?

Do you manipulate others for your own purpose?

Do you mind who your partner is?

(Female) Do you ovulate?

Do you hunt in groups?

Are you undependable?

Are you violent towards strangers?

Do you have opposing thumbs?

Do you grunt?

Do you have reasoned thoughts?

Do you scream when you are attacked?

Do you have parasites in or on you?

Do you clap your hands?

Do you recognise yourself in the mirror?

Do you have sex in the 'missionary' position (face to face)?

Can you get pneumonia?

Does your hair bristle/stand on end when you are scared or aroused?

Do you seek affectionate physical contact?

Are you irrational?

Do you use sponges?

Can you get polio?

Do you imitate others?

Do you seek reassurance and attention?

(Male) Do you recruit women to be your partners?

Can you operate touchscreen computers?

Do you see colours?

(Male) Do you find unfamiliar females more attractive?

Do you have a reduced sense of smell compared to other mammals?

Do you voluntarily suppress your voice?

Does smell affect your sexual arousal?

Did your use of gestures increase throughout childhood?

Have you ever played 'aeroplane' (supporting a child on top of your feet while lying on your back)?

Are you neurotic?

Did you become sexually mature between 10 and 13 years of age?

Do you scratch yourself?

Do you use probes?

Do you intoxicate yourself (alcohol, drugs, etc.)?

Do you form opportunistic coalitions?

Have you ever made someone bear the blame of others?

Do you vary your sexual positions?

Do you remember things from your past?

Do you eat insects?

Do you plan in cooperation with others?

Are your parenting techniques different from others?

Do you get sexually excited?

Do you use weapons?

Do you smile?

Have you bitten a penis off?

Do you wipe your excrement off you?

Do you sneeze?

Do you use intimidation?

Does someone's personality affect whether they are sexually attractive to you?

Do you have spatial memory?

Do you understand sign languages?

Do you sweat?

Do you feel sexual pleasure?

Do you invent complex performances to amuse yourself?

Are you miserly?

Do you tease others?

Do you sense changes in temperature?

Do you kiss?

Do you have sex with more than one partner?

Do you suffer mental and physical pain?

Do you have ten fingers and ten toes?

Do you kiss with an open mouth?

Do you feel sympathy for others?

Do you get ulcers or sores?

Do you use your tongue when you kiss?

Do cultural differences cause you to separate from others and join different social groups?

Are you tender?

Are your toes webbed?

Do you eat leaves?

Do you form coalitions with your siblings?

Are you territorial?

(Male) Do you force others to have sex with you?

If you are cut do you lick the wound?

Do you have social awareness?

Are you tolerant?

Do you express rage?

Do you clean yourself?

Is there a Y-shaped groove in your molar teeth?

Are you an extrovert?

Do you like watching television?

Do you facilitate social actions?

Do you understand symbols?

Is your sleeping area raised off the ground?

Do you have a larger brain, relative to your body size, than other mammals?

Do you smack your lips?

Are you in a social hierarchy?

Do you use physical touch to reconcile aggressive incidents?

Will your hair whiten with age?

(Female) Is it unlikely you will raise more than three offspring to full maturity during your lifetime?

Do you make a coughing sound to indicate slight annoyance?

Do you solve the problems of others?

Do you have various strategies to attract a partner?

Do you climb trees?

Do you make useful tools?

Do you experience collective fear?

Do you victimise others?

Have you ever sucked your thumb?

Are you ticklish?

Do you have a personality?

Do you masturbate?

Do you have a fear of strangers/'outsiders'?

Do you build shelters?

Are you contented?

Do you have oral sex?

Do you get bored?

Do you vary your facial expressions to communicate different messages?

Are you curious?

(Male) Do you use your erect penis to display?

Do you make panting noises during sex?

(Male) Do you ejaculate?

Do you coerce others?

Do you deceive others?

Are you scared of snakes?

Do you shake your fist to express anger?

Do you get depressed?

Do you resolve others' conflicts?

Would you have adopted your younger siblings if orphaned?

Do you dream during sleep?

Do you retaliate or seek vengeance?

Do you feel desire?

Do you have temper tantrums?

Do you grieve?

Do you eat pigs?

When you were a child did you have an insatiable appetite for play?

Do you express your despair?

Do you steal food from others?

When you were a child did you learn by observing and imitating?

Do you have a good short-term memory?

Do you get distressed?

Do you play?

Would you adopt children?

Have you learned actions/skills that were passed to you from previous generations?

Do you have a good memory for individuals?

Do you dominate others?

Can you empathise?

Have you ever played 'rough and tumble' or 'king of the mountain'?

Is your cognitive ability higher than that of most other mammals?

Do you spend a lot of time socialising?

Can you do basic maths?

Are you excessively particular or demanding?

Do you fear?

Can you play computer games?

Do you pat others on the back?

Do you have a lifelong bond with your mother?

Did your parents reject you?

Are you secretive?

Are you absent-minded?

Are you trusting?

When you need to extend your reach upwards, do you find something to stand on?

Can you inhibit your impulses?

Are you addicted to any substances?

Do you dance?

Does your voice sound different to that of others?

Have you been weaned?

Can you improvise?

The Musée de la Chasse et de la Nature
Naturalized fox, Salon Bleu (Blue Salon), 2007 © Sylvie Durand © MCN

Hunting in the Contact Zone

Denaturalizing the museum institution's foundational dualisms, the Hunting and Nature Museum in Paris becomes a naturalcultural *contact zone for, as Donna Haraway would have it, keeping up with the trouble. Joshua de Paiva and Anne de Malleray explore how the museum unfolds a relational narrative that invites visitors to stand in the hunter's boots and follow animal tracks into an ambivalent, experiential contact zone. Questions of reversibility lead us to think anew about the human relationship to wild fauna today at a time of unprecedented environmental crisis.*

text by **Joshua de Paiva and Anne de Malleray**

Prepare for trouble, and make it double!
Team Rocket (Jesse, James, and Meowth) in the anime series *Pokémon*

As we stand outside the entrance of the Hunting and Nature Museum, an elderly lady passing by stops in front of us. She asks: "*This* is the museum of macabre pleasures, right ?" After exchanging confused smiles, we encourage her to find out for herself. She admits never to have set foot inside, and "*never will*".
The combination of the words *hunting*, *nature,* and *art*, and their associated imageries, often trigger immediate misunderstandings and uncontrolled feelings of suspicion, irony or even outrage. What appear as merely amusing anecdotes or occasional outbreaks of social media anger underscore the troubled identity and essential idiosyncrasies of the museum, the contradiction being encapsulated in the name of the institution itself. Between 2002 and 2007, the now outgoing director, Claude d'Anthenaise, has rehabilitated the entire museum, reinterpreting the founder's ambition of bringing the experience of nature into an urban cultural institutional context in the light of recent transformations of our sensibilities in an era of ecological upheaval. Instead of mitigating the complications imbedded in its identity, the museum chose to address those issues, albeit by museographical and curatorial design, rather than through direct or didactic statement, becoming what we propose to describe as a *naturalcultural contact zone* (using Donna Haraway's concept)[1] which offers an anthropozoological perspective on hunting that obliges us to *stay with* the trouble and explore a-moral stories that allow for renewed explorations of our representations of nature.

Visiting the museum, one is simultaneously confronted with a cultural history of representations and phantom imageries of wild fauna pervading hunting mythologies; and invited to *exercise* an ambivalent type of attention towards the animal, which is also that of the hunter. The Hunting and Nature Museum's unique perspective on "Nature" and wilderness is twofold, building both on hunting myths and the sensible experience of the hunter, two dimensions that are consistently questioned, hijacked or re-invested through Claude d'Anthenaise's daring curatorial practice. We explore how the museum, engaging with ever unstable equilibria, has consistently invited the visitors to stand in the hunter's boots, following animal tracks *into* an experiential, liminal contact zone that raises questions of reversibility, and reciprocity, and leads us to think anew about the human relationship to wild fauna. In doing so, we emphasise the museum's role as less a cabinet of *curiosities*, where the visitor is presented with a series of curious, but still inert, *objects*, than an apparatus for encouraging a form of active curiosity to non-human worlds. An intensified, dynamic attention, a continued state of suspense that renders one available for the encounter, rather than a collection of de-animated objects.

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The Musée de la Chasse et de la Nature
Salle du Sanglier (Wild Boar Room), 2007 © Erwan Lemarchand ©MCN

Double Trouble

Hunting *and* nature?

Any museum threshold — a passage from the public space to that of the modern cultural institution — is not only spatial but also symbolic and contractual.[2] However, the "threshold effect" of the Hunting and Nature Museum could be considered quite unique: considering the eco-socio-historical context and the widespread extinction of wildlife driven by human activities, it seems that visitors feel confronted with a quite impossible "contract" before entering the lion's den.

We argue that the visitor's moral trouble — triggered by the uncomfortable intersection of hunting and nature — might never have been as heightened as it is today because hunting has been reduced, in contemporary non-hunter and urban sensibilities, to the very act of *killing* a wild animal, in a society that has, precisely, not only repressed death but also come to consider that the deaths of other-than-human species also *matter*. Until quite recently, being *mortal* — that is conscious of one's own death — was a human prerogative, in the context of a prevailing Western worldview that grants humans a superiority in terms of individuality and dignity over other species. But in the context of the Sixth Mass Extinction and the rise of anti-speciesist movements, and more generally of sensibilities that tend to expand the range of what is granted to other-than-human species — an individuality, a sensibility, personhood — the killing of animal-prey by the hunter-super-predator has not only become incomprehensible — it is unrepresentable and unwatchable. According to adjunct curator Raphaël Abrille, these shifts explain why the act of *exhibiting* death through hunting trophies — the hunter embodying a "profoundly original and paradoxical cultural attitude towards death" — can prompt such reactions of rejection.[3]

Until quite recently, being mortal — that is conscious of one's own death — was a human prerogative, in the context of a prevailing Western worldview that grants humans a superiority in terms of individuality and dignity over other species.

Historicizing Nature: a cultural history of hunting and human-animal relationships

Yet, far from taking sides in the lively French debate, nor delivering any direct justification of contemporary hunting, the museum is committed to charting a cultural history of hunting, while situating and recontextualizing this practice against a wider historical background of multiple — often ambivalent — relations to nature and its inhabitants. This is key to understanding the museum's anthropological perspective on hunting practices and their associated representations, including the eventual critique or ironic distancing.

As such, the works presented retrace both a history of techniques and a history of representations. The museum displays an immense collection of hunting trophies, tools and weapons of multiple styles and epochs, and a great diversity of objects related to the history of hunting — such as a collection of 18th century zoomorphic terrines or a series of precious dog collars. Added to (and often intertwined with) this cultural history of the evolution of hunting practices and the folklore surrounding them is an itinerary through hunting mythology, starting with the intimate "Cabinet de Diane", that pays special tribute to the hunting and nature goddess Diana, housing two paintings by Pierre Paul Rubens and Jan I Brueghel.[4]

The Musée de la Chasse et de la Nature
Salle des Trophées (Trophies Room), 2007 © Sophie Lloyd © MCN

This cultural history unfolds through the centuries to present times, the museum displaying contemporary works of art — in temporary exhibitions or included in the permanent collections. Some of them involve a degree of questioning hunting practices, in tune with contemporary concerns and cultural, environmental, socio-historical contexts; notably — Ghislain Bertholon's *Troché de face,*[5] a reversed trophy showing a lion's naturalised hindquarters, visibly trying to escape the wall; a (fake) right-angled corner twisted gun,[6] or Christian Gonzenbach's *Safari* series of fine earthenware childlike animals showing wide shotgun bullet holes.[7] Invited contemporary artists have often chosen to explore matters of life and death, responsibility and culpability. These interventions have not necessarily blamed hunting as a practice *per se*, rather opened up disconcerting dialogues, with, among others, a buffalo's crocheted head in a fake-blood puddle[8] in the Weapons Room, a wallpaper populated with cartoonish beheaded deers,[9] or more recently, Théo Mercier's apocalyptic horse, a three-dimensional *écorché*.[10]

But more importantly, the museum situates the human-animal predator-prey relationship — constitutive of hunting — against a more general canvas of multiple and historicized representations of animality, which have and continue to catalyse

Art Orienté Objet

Les Pieds dans le plat, in *Le Jardin des délices,* exhibition view. 2013 © Nicolas Hoffmann © MCN

the relations we nurture. The Wolf and Deer Room is a wonderful example of how the museum invites us to reconsider our ever ambivalent relations to other species, and their evolution, from the Middle Ages — with the Christian symbolic opposition between the glorified, Christic Deer that appeared to Saint Hubertus with a crucifix between its antlers, a symbol of Resurrection, and the demonised wolf, an incarnation of evil — to contemporary imaginaries and eco-socio-political issues. The wolf, eradicated in France in the 1930s, is here literally *embodied* by one of the first individuals legally killed by French wildlife services (in 2005) after the animal's return to the Alps in the 1990s. Protected since 1979 by Berne's convention, the wolf raises questions about cohabitation and diplomacy,[11] a subject of intense debate between politicians, ecologists, and especially farmers. Rather small, this individual is not very impressive in his summery fur, not quite matching our inherited imaginaries about the species; it could almost be mistaken for a harmless dog, waiting to be patted.

Protected since 1979 by Berne's convention, the wolf raises questions about cohabitation and diplomacy, a subject of intense debate between politicians, ecologists, and especially farmers.

The museum, with its many rooms dedicated to specific animals, continuously brings into perspective our contemporary sensibilities and the different statuses we grant animals — wild; companion or domestic, with hunters' closest adjuvants such as dogs, horses, and birds of prey; but also pest, such as the fox who has a history of troubled relations with hunters; or protected, the wolf. As we move through the museum, we come to realize that animals assume different kinds of roles, depending on their (sometimes bumpy) relationships with humans throughout history. Recounting these contrasted stories cannot go without mentioning humanity's role in the current extinction event, be it through the presence of Victor the polar bear, an icon of climate change, or on a very subversive mode with Toffe's tin cans, said to contain extinct or endangered species meat: crocodile, rhino, elephant, tiger…[12] many emblematic of safari hunting. There is no Animal with a capital A, rather multiple types of relationships with them — including that of hunting — *relational* and historical stories that begin to question from within our unifying concept of *Nature* and of an idealised wilderness.

Denaturalizing the museum institution

This unique exploration of our representations of hunting, nature, and animality has implications for the museum as an institution, disrupting its founding principles, ontological premises, and metaphysics of subjectivity, all rooted in a specifically *modern* worldview. As Fiona R. Cameron recalls, the first museums were established, in the 18th century,

> at a formative point in the development of the natural and human sciences […] when nature and culture became organised into distinct, independent realms, and the modern humanist Human subject/object distinction and a reliance on vision set up new relations with the world. The Natural History Museum is an example of the ongoing operation of these doxas. […] [T]he human subject and object dualism continues to operate where specimens are collected, studied […], classified according to their physical attributes and presented as objective facts.[13]

The modern ontology indeed pervades the museum's foundational

Jessy Deshais
Les fonds de placard, Wallpaper. 2014
© Sophie Lloyd ©MCN

The Musée de la Chasse et de la Nature

Salle du Cerf et du Loup (Wolf and Deer Room), 2007 © Sophie Lloyd © MCN

gestures: 1° the Nature and Culture Great Divide — which dictated the division between the Fine Arts and cultural-historical museums on the one hand; the natural history museum on the other — 2° the Object/Subject ontological cut — the collected and exhibited objects; the human visitor — and 3° the primacy of vision in a hierarchy of the senses. Art historian Vincent Normand builds on the same analysis of the exhibition regime as a "generic object of modernity",[14] historically coded by "positivist and objectivist forms of rationality".[15] This genre embodied and naturalised what he calls the modern *scopic regime*, after Martin Jay:[16]

> [t]he public museum, the modern space of exhibition of scientific objects or artworks *par excellence*, is inscribed in a series of anthropological determinations shared by many modern technologies of the gaze and cultural practices that, together, define modernity as a reformation of vision. [...] The museum is defined by the "dialectical reversal" it imprints on the "life" of objects: [...] it de-animates previously animated entities by uprooting them from their "milieu" and re-animates "dead" objects by over-determining their signification and projecting them in a restricted field of attention.[17]

The general spirit of accumulation and unusual juxtapositions makes it difficult for visitors to identify what type of cultural institution this is, as many exhibition genres are combined, and the usual distinctions between educational purposes, scientific knowledge of the natural world and the aesthetic representations no longer prevail.

Normand proposes to root the museum's dissection and de-animation gestures in the anatomical theatre, where the dramatised observation of nature created a clinical distance between the spectators and the dissected bodies, which "guarantees" the emergence of scientific facts. This new scientific representation of nature goes with the emergence of the modern *spectator*, abstracted from nature: subjects and objects are co-produced, subject and world opposed.

In the Hunting and Nature Museum, the Subject/Object, Nature/Culture, Truth/Fiction dualisms are destabilised, as the museography has been imagined as a succession of rooms in a grand familial mansion: its chairs, a couch arranged in front of a coffee table, and other domestic furniture instantly reconfigure the visitor's attitude. In this context, the artworks seem to re-assume what might have been their original functions — which intermingle decorative, social, aesthetic and sometimes utilitarian dimensions — before they were displaced and *cut off* by traditional museographic sacralising, clinical, and de-contextualising gestures. Is it a museum at all? Is this Jeff Koon's *Puppie* porcelain sculpture[18], casually placed on an 18th-century ceramic stove in the corner, a merely decorative, kitschy vase found in a flea market? The usual distinctions between craftsmanship and art, the high and low genres in art history, and even the aesthetic and the utilitarian, no longer prevail. This has the effect of defusing any spirit of seriousness that usually underscores a visit to a museum institution. We are freed from the imperative to pay attention to every object; visiting the museum becomes more of a wandering, where attention can be caught at any time by a singular object, or a strange assemblage.

The relative absence of texts plays a crucial role in rendering possible this kind of non-prescriptive experience. The artwork's descriptions are not displayed alongside the objects but assembled in general leaflets for each room. The distance between the objects and the visitors is reduced, or even, suppressed; on both the physical and discursive levels: there seems to be no evident, imposed interpretation of what should be understood or felt.

Jan Fabre

La Nuit de Diane, Cabinet de Diane (Diana's Cabinet), 2007 © Erwan Lemarchand © MCN

The general spirit of accumulation and unusual juxtapositions makes it difficult for visitors to identify what type of cultural institution this is, as many exhibition genres are combined, and the usual distinctions between educational purposes, scientific knowledge of the natural world and the aesthetic representations no longer prevail. Not only does the museography combine various historical styles and atmospheres, from an alchemist cabinet to an Ancien Regime society Salon, but it also blurs every museographic principle: hunting trophies and guns meet taxidermy specimens, ancient engravings, naturalist "cabinets", and art historical masterpieces. The *nature* and *culture* divide thus becomes obsolete in a site that lies at a crossroads between the *Wunderkammer*, the Natural History Museum, the Heritage Museum, the Art Gallery, and the Museum of traditions and human technique, or the Museum of Design.

The museum's stuffed and mounted animals endorse an ambiguous, if not radically subversive, status, blurring the boundaries between science and art, reality and fiction. Examples include a narwhal-unicorn sculpture[19] — accompanied by Joan

The Musée de la Chasse et de la Nature

Coq à corne, dépôt du Muséum national d'Histoire naturelle, 2007 © Sophie Lloyd © MCN

> ***[S]taying with the trouble requires learning to be truly present, not as a vanishing pivot between awful or edenic pasts and apocalyptic or salvific futures, but as mortal critters entwined in myriad unfinished configurations of places, times, matters, meanings.***
>
> ***-- Donna Haraway***

Fontcuberta's real-fake 1954 newspapers attesting to the unicorn's existence[20] — or Julien Salaud's *Faisanglier,*[21] a *fictional* naturalised wild boar/pheasant hybrid. Conversely, one can also encounter a rooster with a crooked horn on its head, a *true* specimen that originally belongs to the scientific collections of the Muséum National d'Histoire Naturelle. These remind us that all taxidermy specimens — the classic example of the aforementioned de-animating gesture and heritage of colonial violence that pervade the ambivalent act of "naturalisation" — are, on different levels, products of some degree of fiction, as they give away a certain state not only of scientific knowledge but of cultural conceptions, often crystallising our (mis) conceptions of the living animal. In Donna Haraway's words: what might "appear effortlessly, spontaneously found", is in fact "painfully constructed".[22]

Creating bridges between the zoological, scientific and technical dimensions and that of fine arts, and exploring the past and present relations between the animal world and human societies, the museum can be thought of as a sort of *anthropozoological* museum that deconstructs museographic gestures and foundational ontologies by *historicising* Nature, or, in other words, *denaturalizing* the museum.

Dealing with the trouble: towards a-moral stories

The entire museum becomes a threshold, a liminal space, or, rather than a border to cross, what we propose to call a *naturalcultural* "contact zone" that invites the visitors to deal with their inaugural discomfort and immerse themselves in a broader kind of *trouble*, in the Harawayian sense.

The aforementioned iconoclastic museographic principles operate a broadening of the trouble, which comes to qualify not only the experience of the visitor but what he is confronted to, *i.e.* our relationship to what we used to call Nature. As Donna Haraway underlines, "*[t]rouble* is an interesting word. It derives from a thirteenth-century French verb meaning "to stir up", "to make cloudy", "to disturb". We — all of us on Terra — live in disturbing times, mixed-up times, troubling and turbid times".[23] Further, she calls for *staying with* this trouble:

> [o]ur task is to make trouble, to stir up potent response to devastating events, as well as to settle troubled waters and rebuild quiet places. [...] [S]taying with the trouble requires learning to be truly present, not as a vanishing pivot between awful or edenic pasts and apocalyptic or salvific futures, but as mortal critters entwined in myriad unfinished configurations of places, times, matters, meanings.[24]

Having chosen to stay with the trouble of our representations of nature, the museum proposes a unique way to take seriously contemporary ecological issues, distanced from any kind of clear and moral statement about what should be done; rather, building on and emphasizing ever-unstable equilibria. Théo Mercier's show *Every Stone Should Cry*[25] and its series of unstable sculptures was a masterful exercise in staging these permanent tensions — those of the "instant before" when everything is at risk of complete collapse. Returning to the museum's name, we might come to sense that the word which

ought to prompt reactions of suspicion should be “Nature“, maybe more, or at least as much as “Hunting“: *double trouble*.

A *contact zone* emerges as a shared space where things and beings are entangled, and where encounters of different sorts might happen. In *When Species Meet*, Donna Haraway borrows this concept from Mary Pratt, who adapted it from its original use in socio-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”.[26] A *contact perspective* “emphasizes 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”.[27] Moreover, Haraway also thinks of contact zones as ecotones, which refer to transitional zones between two ecosystems, and their *edge effects*: where “assemblages of biological species form outside their comfort zones. These interdigitating edges are the richest places to look for ecological, evolutionary, and historical diversity”.[28]

A naturalcultural contact zone, the Hunting and Nature Museum is indeed a space where cultures, epochs, symbolic universes and competing or coexisting lifeworlds meet and collide with each other. There, the aim is not to erase nor merge the differences, but to open up a space for taking them seriously, and examining them. This requires a suspension of the moral judgment that allows for a-moral, or, as Vinciane Despret once put it commenting on Anna Tsing’s work, “de-moralizing” stories to be told.[29] These, indeed, following anthropologist Anna Tsing who herself followed matsutake mushrooms and their pickers, allow us to *slow down* and to avoid excessive and premature abstraction and generalisation.[30] These are situated stories based on minute descriptions that are freed from any paralysing and guilt-inducing moral injunctions. A singular way of *holding on to* things, beings and, most importantly, their relationships — which the museum attempts to elicit in the visitors’ experience of trailing their way through this contact zone.

The museum not only explores our cultural representations of nature but was founded on the original claim of rendering the very experience of an encounter with wildlife.

As a matter of fact, the museum not only explores our cultural representations of nature but was founded on the original claim of rendering the very *experience* of an encounter with wildlife. This experience is based on that of the hunter, namely of François and Jacqueline Sommer, collectors and patrons, who created the Hunting and Nature Foundation in 1964 and the Museum in 1967. But, as the former President of the Hunting and Nature Foundation Christian de Longevialle wondered, “[i]s it simply possible to convey the experience of nature? [...] Can culture translate what has not been transformed by humans, this periphery of civilisation that we call the wild? The Hunting and Nature Museum has been committed to handling this irreducible paradox”.[31] However, since its reopening in 2007, the museum has proposed to its public an unsettling way of facing what can be described as a “crisis of sensibility”[32] towards non-human living beings, in a large part due to what Robert Michael Pyle described in 1993 as an “extinction of the experience”[33] of nature. The visitor is invited to follow the hunter’s or huntress’ tracks, him or herself following the animals’ trails into the hunting *experiential* contact zone.[34]

Théo Mercier
Peau de chagrin, in *Every Stone Should Cry,* exhibition view,
2019 © Erwan Fichou © MCN

Experiencing the contact zone

The art of tracking: tracking, and being tracked

Making one's own way through the uncanny museography, as a tracker in unfamiliar woods, requires that we collect information, but also follow our intuition. Along the way, we find ourselves confronted with contradictory signs. This creates the ground for developing what Anna Tsing calls an *art of noticing*: renewed forms of attention, that of the gatherer, but also, indeed, of the hunter — as an important and significant phase of hunting consists of following, deciphering and gathering the animal's tracks. Elicited by the general atmosphere and the systematic reduction of any kind of distance between the visitor and the objects, this form of attention is also triggered by a set of specific details along one's path, from artist Saint Clair Cemin's bronze bas-reliefs that guide the visitor through the floors, with their animal figures, footprints and vegetation, to, literal dog footprints left in the terracotta tiled floor of the Horse Cabinet, just as they would appear in the muddy ground of a forest. The pieces of information are there but need to be *looked for*. The naturalists' cabinets that provide ethological data about the animal hosts can be thought of as a guide for tracking; they even display tracking markers such as animal footprints and feces cast in bronze. As Claude d'Anthenaise puts it, all the elements "prompt the visitor to be alert, just as the hunter after its quarry has to be attentive to keep following the trail".[35] Tracking informs us of the hunter's affective and relational experience to the animal that is an embodied, in-corporated kind of *curious* attention, the opposite of a clinical, disembodied observation.[36] As anthropologist Pierre du Plessis has proposed, studying *tracking after hunting* with San hunters in the Kalahari, tracking, as a relational practice, is primarily "about being ready and available for encounters with nonhuman others in a shared environment made possible by an attention to material signs and traces revealed by the landscape".[37]

As Claude d'Anthenaise puts it, all the elements "prompt the visitor to be alert, just as the hunter after its quarry has to be attentive to keep following the trail".

But there is more to this *art of tracking*. Visiting the museum, we come to sense that we might ourselves be tracked. As architects Frédérique Paoletti and Catherine Rouland claim, "[s]urprise comes from everywhere; animals are watching you".[38] In the small Diana Cabinet, an eerie reversal of roles — observer/observed, human/animal, subject/object — takes place: looking up, we realise we are being vigilantly observed by Jan Fabre's six owls and their fake human eyes.[39] Comparably, Nicolas Darrot's animatronic albino wild boar,[40] displayed among the hundred of hunting trophies, quietly follows the visitor with his red eyes, before grunting in a bizarre and otherworldly language. As philosopher Baptiste Morizot recounts about his experiences of tracking wolves in the South East of France, when he realised he was himself being tracked:

> they are around [...] and almost as curious about us than we are about them. This reversal of roles may indicate that tracking doesn't establish a transcendent position of the human among other living beings, as if he were a reader that wasn't read [...]. *Tracking always implies the possibility of being tracked at the same time*. Often, while bent over a track, a

Bruce Sargeant

Bathing at camp (1932-1933), Oil on canvas, 2016 © Benjamin Soligny © MCN

> hawk's call draws the tracker's attention to the skies. He examines the borders, in vain, prisoner of the circular paradox of tracking: who is watching you while you are deciphering a footprint? Whose amused gaze are you the carefree object of, that is, the prey? [41]

What he calls the "discreet art of tracking" not only demands that the tracker adopt the perspective of the animal, seeing through its eyes, but is always somehow reciprocal: "the objectifying attitude towards the living is surreptitiously reversed in the forest".[42] Analogous dynamics of symmetrization seem to be at play here, as the objectifying attitude towards the *artworks* and objects is surreptitiously reversed *in the museum.* We cannot help but wonder: to whom are we becoming prey?

The art of lure and deception: luring, and being lured

Putting ourselves in the hunter's boots and following the animal's tracks requires avoiding the *wrong* tracks, as Claude d'Anthenaise says.[43] He has become a master in the art of trapping the hunter-hunted visitors of what he likes to call the "Fake museum".[44] As the architects state: "all the details of the trap have been thought of very carefully",[45] to radically destabilise the visitor's position, blur the line between truth and fiction and elicit critical thinking.

In 2007, artist Jean-Luc Bichaud was invited to create *The Cabinet for decoys*. Faking the scientific codes of collection — the labels were counterfeited by hand to imitate old scientific labels — and fooling not birds or other animals, but the visitor with a series of hijacked, everyday objects without acoustic qualities, this installation (*Souffler n'est pas jouer*) best embodies the reversal processes at work in the museum. Generally unfamiliar with the art of decoys that are used for hunting, the average visitor is lured into taking these objects seriously. As Claude d'Anthenaise mischievously puts it, "[a]ll the artworks, whatever the artist, are presented on an equal level. The visitors are [...] left with the responsibility of uncovering *who's playing possum* to separate fact and fiction". [46] Maybe the most radical trap, *Safaris/Safarix*, an entire group exhibition, showed a selection of works depicting the tradition of safari hunting, and the colonial histories of man-the-heroic-hunter in a fantasied Africa.[47] We must be very attentive to details if we are to uncover the masquerade — even though it was contained in the inaugural recounting of the archetypical, fictional, hunting heroic story of Eugène Pertuiset, who claimed to have killed a black lion. Most of the paintings were attributed to five "historical" artists ignored by the general public: Hippolyte-Alexandre Michallon (1849-1930), Bruce Sargeant (1898-1938), Edith Thayer Cromwell (1893-1962), Brechtholt Streeruwitz (1890-1973) and Peter Coulter (1948-), each with an entirely fictional biography. These works were all created by a single contemporary artist, Mark Beard. The homo-erotic imagery that infiltrated these paintings might have been the key to unveiling the travesty, inducing sarcastic distancing *vis-à-vis* a certain state of manhood and the dynamics of race, sex and class at work in the safari. Yet, almost everyone fell into the trap.

As historian Jérôme Buridant explains, following the trail during the hunt is not a stroll in the woods. Sometimes, deer, roe deer or hare mislead the dogs into following the tracks of another animal (in French: *donner le change*). At other times, the animal performs what is called a "hourvari": turning back in one's tracks to trick the dogs, by doubling one's trail.[48] Deers are well known for their ability to deceive both hunting dogs and hunter, following humid paths and streams to entangle their trails. But as José Ortega y Gasset underlined in his *Meditations on hunting*, it is important not to forget that essentially, "hunting is *not* [a] reciprocal [relation]".[49] Strictly speaking, hunting is asymmetrical: prey cannot then prey upon its own predator. This doesn't mean that hunting is devoid of any possible reversal processes, insofar as luring implies the possibility of being lured. As he puts it, "the critical inequality between prey and hunter still allows, on some occasions, the hunted animal to surpass the hunter. She can be faster, stronger or smarter". Moreover, the hunted animal "does not necessarily become possessed. Success is far from being essential to hunting".[50]

Some have argued that the observation of animals exercising the art of lure can help create a sense of *common* intelligence between animals and humans. Encyclopédiste and lieutenant of royal hunts Charles-George Leroy's (1723-1789) *Letters on the intelligence of animals* are full of tales of luring and being lured. Opposed to the Cartesian theory of the animal-machine, Leroy proposed that animals were possessed with and capable of memory, strategy, learning, and sensibility. According to him, hunting was the perfect site for observing these behaviors, as the animal is in a situation where he has to "invent" and plan a strategy to lure the hunter.

Putting oneself mentally in the perspective of others requires attributing them beliefs, desires, and intentions — which some animals exercise not only among themselves but also towards humans.

What can we learn from the dialectics of luring and being lured? Commenting on ethological studies about lies and deception amongst non-humans since the end of the 1970s, Despret remarks that luring has been associated with the capacity of knowing how others behave, and, further, granting them with a certain degree of *intentionality.* Putting oneself mentally in the perspective of others requires attributing them beliefs, desires, and intentions — which some animals exercise not only among themselves but also towards humans. Getting interested in the arts of deceiving others in the animal world has indeed led scientists to grant them with cognitive, social and even political abilities they were deprived of until then.[51]

Following Despret, something here demands that we *slow down*. Lying, as an object of study, destabilizes the questions we ask to animals, and leads to blurring the boundaries of what is deemed moral or immoral: "[b]ecause lying is based on the possibility of understanding the intentions of others", it has ended up being correlated with social cooperation: "[a]ltruism and deception are two sides of the same aptitude, social subtlety. The world demoralizes and remoralizes itself [...]".[52] Taking seriously the arts of lure requires being ready to tell a-moral stories.

Acknowledging that luring entails the possibility of being lured opens up new possible areas of commonality, insofar as we realize that in the forest — just as in the museum — everything and everyone becomes an *agent*, an active part of the *drama*. Transposed to the curatorial practice, and drawing on the experience of the lured hunter, luring causes a consistent jeopardising of the traditional experience of the subject-visitor, nurturing a pervasive state of confusion: outside of its specific meaning in hunting treaties, in every-

day language, a *hourvari* refers to an uproar, a troubling tumult. The traps to the visitor are never gratuitous, and Claude d'Anthenaise rarely gives away his tricks. In the museum, the hunted visitors do not necessarily realize they have been trapped, remaining ignorant of the *hourvari* at play. We can begin to wonder what conditions the success of the lure; and if visitors, *at some point*, should understand that they have been trapped. What if everyone takes it all seriously?

Into the contact zone:
a liminal, embodied and risky experience

A third level of potential reversal is sometimes alluded to in the museum. The ultimate reversal, that of being killed by the animal, calls for a reflexive perspective on our own position of master-predator over what we have called Nature. This liminal experience is present in Western myths — that of Diana and Actaeon in particular. Not only is it explored through ancient and modern representations, but it was also reinterpreted by Gérard Garouste in his 2018 solo show within the museum: an exploration of metamorphosis, sexual inversions, and the fatal reversal that leads to Actaeon being devoured by his own dogs. Liminality and risk have always been part of the experience of the hunter, as recounted and emphasized in many hunting stories. These constitutive dimensions of hunting are ambivalent as they have been key ingredients of *heroic* hunting stories while also being present in other kinds of stories, closer to pagan cults and non-western cosmologies, where the risk of not coming back from the hunt — being killed, or metamorphosing into an animal — takes on different meanings.

If the arts of tracking and luring can be considered two guiding curatorial principles that shape the visitor's experience, the animal's death and the reflexive attitude towards the human's role in its killing, are never absent. In the museum, it seems the animal's death is often mirrored by or contemplated with the possibility of human death, as was evident in Théo Mercier and Erik Nussbicker's shows in 2019, just before the museum closed for renovation work. Mercier had filled the Unicorn Cabinet with tens of miniature human skeletons carved in real bones, staging an apocalyptic Kamasutra of sorts, an installation maliciously entitled *Happy Ending*.[53] These sexual relations of bodies without organs raised questions about living in catastrophic times, and disturbingly resonated with the kinds of affects at play in hunting, and the ever ambivalent relationship between the preyed upon animal and the hunter that ends with a deadly embrace.

The embodied *contact* zone opened by the Hunting and Nature Museum is one where risky, curious, shared and desiring forms of attention are elicited and demanded. In this specific context, we borrow from Despret's analyses about animal deaths and zoophilia to propose *hunting* as a *site for the magnification of boundaries*. Despret refers to Catherine Rémy's text, *La fin des bêtes*, where, according to the sociologist, "[t]he killing of animals, as an act, [...] "magnifies" the existence and production of "humanity's boundaries". The individuals ceaselessly carry out a work of categorization that tells us about the practical accomplishments of the boundary between humans and animals".[54]

Jean-Luc Bichaud

Souffler n'est pas jouer, wood, metal, leather, 2007 © Sophie Lloyd © MCN

The situated museum and the world as "fox"

"Am I the only one to see how obscenely sick the Hunting and Nature Museum actually is?" [55]

The museum's shifting and unsettling associations are precisely a response to the apparent "hunting/nature" paradox that is becoming ever more challenging in the context of the current ecological catastrophe. The museum founder's initial ambition of conveying an "*experience* of nature" has indeed, in recent years, taken a dramatized meaning, in the context of over-domestication and a crisis of sensibility towards non-human beings that resulted from the loss or even "extinction of the experience of nature".[56] This led the museum to explore new ways of engaging visitors on sensible and discursive levels, drawing on constitutive dimensions of the hunter's experience to do so. Far from relaying any kind of preexisting ready-made "ecological" discourse, the curatorial principles and engagement with contemporary art allow the museum to unfold amoral stories that bring together multiple and

often contradictory perspectives and re-explore the affects at play in embodied kinds of *sensible* encounters with wildlife. In this context, we are brought to question not only the ontology and epistemology on which the museum institution and its scientific, educational and artistic distinct purposes were grounded, but also the position of the human in relation to "Nature": no longer standing outside, *facing* natural landscapes, but *within* "Nature", in shared, common and contrasted territories, as Bruno Latour argued in the introductory text of the group exhibition *Animating landscapes. Following the tracks*, in 2017.

Keeping up with the trouble is a tricky, serious game; a practice that takes some nerve. It might require *not* saying what you do *nor* doing what you say. This might be rule number one of Claude d'Anthenaise's cunning curatorial practice. Irony, unlike a joke, cannot give itself away. The irony at play here is, paradoxically, not one of cold distance. We propose to think of the museum's ironic posture as a way of dealing with the ambivalence in the world itself: an embodied, passionate irony that works from within the contact zone.

Seemingly unconcerned, coiled in his bourgeois armchair, he is always alert, never missing a moment with his eyes perpetually half-open.

At first glance, and before passing through the museum's threshold, it may seem inappropriate to summon feminist theory in our discussions here. However, as we delved into the ironic dynamics at play in the museum, we came to realise that feminist ecotheory might help us better describe what staying with the trouble means and entails in this context. The Hunting and Nature Museum might offer up a site for exploring forms of *situated* knowledge, representational practices and experiences, in the sense called for by *feminist "embodied" objectivity* theories, as opposed to "ideological doctrines of disembodied scientific objectivity".[57]

Being *situated*, according to sociologist Benedikte Zitouni, means, in a minimal sense, to acknowledge *where* and *when* one is talking from, from which kind of *experience*, while accounting for this very experience.[58] It is thus, firstly, an imperative of reporting on what mediates our access to the world — the social context and personal and collective histories that shape one's own discourse and position. But moreover, to be situated is to acknowledge that it is the world itself which demands that we situate ourselves within it, by becoming an active part of it: it is a manifesto, or perhaps something like a bet, a risky gamble that chooses to take seriously how open to risk the world actually is. In the Hunting and Nature Museum, the bet is constantly replayed, questioned and outbid. As Zitouni exposes, being situated, in this sense, means 1° recovering our capacity to refer to "real worlds" — through an ability to explore, to be "insatiably curious" towards the world, in Haraway's own terms — 2° cultivating a "passionate detachment",[59] learning how to make some hidden or offbeat dimensions or versions of the world matter and, 3° regarding these real worlds as "*treacherous coyotes*". Summoned by Haraway in her *Situated Knowledges*[60] text, the coyote figure, can "define the world which we are dealing with. The world is coyote. He is tricky and full of humour".[61]

We propose to think of the Hunting and Nature Museum as a *situated* and *situating* structure, which deals with the world *as coyote*, or, as we propose here, as *fox*; to make a transposition to a species present in France, more "familiar" to European hunters, and a close relative on a symbolic level. Victor the polar bear has long been considered the mascot of the Hunting and Nature Museum,

yet, we begin to wonder if this house is not, in fact, the trickster-fox's home. Seemingly unconcerned, coiled in his bourgeois armchair, he is always alert, never missing a moment with his eyes perpetually half-open. We become transformed by the world as coyote/fox: "bound by a double rational exigence: the coyote demands that we learn how to trick, lure, invent, *to keep up with his own forces*; conversely, we demand that he is active, enigmatic, surprising, that he lives up to our own longings-for-the-world".[62] Perhaps more than ever, the world itself is ambivalent and foxy and demands the same of us in return if we are to invent paths for surviving the catastrophe. Following Benedikte Zitouni's analyses,

> *[a]mbivalence* means: that shows at least two traits [...], opposed or not. [...] [F]abricating situated knowledges only is relevant for those who believe that the sides of friends and foes are never so clearly identified, that the divide between good and evil can never be determined in absolute terms but that the line needs to be drawn in and from a situation always practical and problematic. No one can escape the current devastation unharmed. No one is innocent. [...] [S]ituated knowledges are relevant only for those who feel the need [...] for reconfiguring the landmarks, reshuffling the cards, moving fronts and experimenting several positions, connections, shifted perspectives, in and for these ambivalent realities.[63]

Inside the museum, suspending the moral trouble in order to tell amoral stories allows us to de-incarcerate (*désincarcérer*) hunting practices (plural and diversified) from the moral debate and infernal alternative in which they are caught and recognise, through this situated practice, the ever-ambivalent nature of things, beings, places, and relations. This allows us to explore the arts of tracking and luring, and the kinds of attention they elicit toward other, non-human living beings; while always being reminded of the possibilities of being tracked and lured at the same time.

Doing so also demands consistent questioning of the figure of the hunter itself. In French, *désincarcérer* literally means extracting someone from a wrecked vehicle.[64] The museum complexifies the heroic story of man-the-hunter through the presence of huntress figures, through subverting the status and meaning of hunting trophies, and most importantly, through the multiple processes of reversal and inversion at play, which inform the *foxy* museographic choices, and in turn, the experience of the hunter-hunted, luring-lured, tracker-tracked visitor. On numerous occasions, the man-the-hunter trope has been criticized and debunked, through the contemporary artistic curations and the use of irony.[65] There is no longer a single, unique story of hunting, but multiple stories, themselves reintegrated into broader, sometimes *sick*,[66] stories.

Endnotes

[1] Haraway, Donna. *When Species meet.* Posthumanities, Volume 3. Minneapolis: University of Minnesota Press. 2008.

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[3] Abrille, Raphaël. " La mise en scène du sacrifice " in *Le Chasseur et la mort.* Actes du colloque " La chasse, une exception culturelle dans la vision contemporaine de la mort " organisé par le Conseil international de la chasse et de la conservation du gibier, à Rambouillet en 2004. La Table Ronde, Paris. 2005, pp.111-112.

[4] Rubens, Pierre-Paul and Brueghel, Jan. *Diane et ses nymphes s'apprêtant à partir pour la chasse*; *Diane et ses nymphes observées par des satyres.* Oil on wood. 57 x 98 cm and 61 x 98 cm. Circa 1623-1624.

[5] Bertholon, Ghislain. *Troché de face, lion.* Taxidermy and lacquered wood. 130 x 100 x 48,5 cm. 2015.

[6] Pii. *Suhl Shotgun en angle droit.* Wood and metal. 83 x 49 x 5 cm. 2009.

[7] Gonzenbach, Christian. *Safari.* Fine earthenware. 17 cm x 15 x 12 cm. 2007.

[8] Art Orienté Objet. *Les Pieds dans le plat.* Resin sculpture, buffalo wool, glass, wax. 120 x 200 x 250 cm. 2013.

[9] Deshais, Jessy. *Les fonds de placard*. Wallpaper. 2014.

[10] Mercier, Théo. *Peau de chagrin.* Polyurethane, silicone, horse hooves, teeth, and hair. 220 x 80 x 180 cm. Collection of Stéphane Corréard. 2012.

[11] See Morizot, Baptiste. *Les Diplomates. Cohabiter avec les loups sur une autre carte du vivant.* France: Wildproject. 2016.

[12] Jacquet, Christophe (Toffe). *Standard conserve.* 42 tin cans. 2012.

[13] Cameron, Fiona R. " Theorising more-than human collectives for climate change action in museums " in *Ecologising museums.* L'Internationale Online. eBook publication. Ed Aikens, Nick et al. 2016. pp.26-27.

[14] Normand, Vincent. " The eclipse of the witness: natural anatomy and the scopic regime of modern exhibition-machines ", in *Ecologising museums*. 2016. p.91.

[15] Normand, V. 2016. p.93.

[16] The term was used by Martin Jay (1999) who borrowed it from the French film theorist Christian Metz (*Le signifiant imaginaire: psychanalyse et cinéma*, Paris: Christian Bourgois, 1977).

[17] Normand, V. 2016. p.93.

[18] Koons, Jeff. *Puppie*. Porcelain. 1998.

[19] Cemin, Saint Clair. *Tête de licorne.* Bronze and narwhal tusk. 2005.

[20] Fontcuberta, Joan. *La Licorne*. Newspapers. 2006.

[21] Salaud, Julien. *Faisanglier*. Naturalised wild boar, pheasant feathers. 160 x 35 cm. 2015.

[22] Haraway, D. 1984-1985. p.34.

[23] Haraway, Donna. *Staying with the Trouble*. Durham: Duke University Press. 2016. p.1.

[24] Haraway, D. 2016, p.1.

[25] Mercier, T. *Every Stone Should Cry*. Solo show. Hunting and Nature Museum, Paris. April 23rd - June 30th 2019.

[26] Haraway, D. 2008. p.216.

[27] Pratt, Mary Louise. *Imperial Eyes: Travel Writing and Transculturation.* New York: Routledge. 1992. pp.6-7.

[28] Haraway, D. 2008. p.217.

[29] Tsing, Anna, Despret, Vinciane and Loup. " Cohabiter : Assemblages terrestres ", Ce qui dépend de nous. Talks at la Gaîté Lyrique (Paris). May, 28th, 2019.

[30] See Tsing, Anna. *The Mushroom at the End of the World. On the Possibility of Life in Capitalist Ruins.* Princeton: Princeton University Press. 2015.

[31] de Longevialle, Christian. in *Le Cabinet de Diane au Musée de la Chasse et de la Nature.* Paris: Citadelles et Mazenod. 2007. p.6. All quotes from French publications are translated by the authors.

[32] Zhong Mengual, Estelle and Morizot, Baptiste. " L'illisibilité du paysage. Enquête sur la crise écologique comme crise de la sensibilité " in *Nouvelle revue d'esthétique*, 2018/2 (n° 22). pp. 87-96. DOI : 10.3917/nre.022.0087.

[33] Pyle, Robert M. *The Thunder Tree: Lessons from an Urban Wildland.* Corvallis: Oregon State University Press. 1993. Reprint 2011.

[34] In the following developments, we voluntarily refer to "hunting" and the "hunter" or "huntress" in a generic anthropological sense.

[35] Hunting and Nature Museum." Parcours muséographique ". Internal document.

[36] As Pierre du Plessis rightly suggested, *tracking* is also, maybe more importantly, *a relational experience to the animal's own relations to its environs, with which the tracker too is entangled.* Personal communication.

[37] du Plessis, Pierre. *Gathering the Kalahari: Tracking Landscapes in Motion.* Aarhus University, Department of Culture and Society, PhD dissertation. June 2018. p.77.

[38] Hunting and Nature Museum." Parcours muséographique ". Internal document.

[39] Fabre, Jan. *La Nuit de Diane.* Glass and feathers. 2007.

[40] Darrot, Nicolas. *Sus scrofa albinos*. Mixed techniques. 2006.

[41] Morizot, B. *Sur la piste animale*. France: Actes Sud. Mondes Sauvages. 2018. p.126.

[42] Morizot, B. 2018. p.126.

[43] Personal communication.

[44] d'Anthenaise, Claude. " Fake rhinoceros, Fake museum ". Talk at École Nationale Supérieure des Arts Décoratifs. February, 13th, 2019.

[45] Hunting and Nature Museum." Parcours muséographique ". Internal document.

[46] Quoted in " Musée de la chasse. Quel tableau au Fhel ! " in *Le Télégramme*. June, 13th, 2019. https://www.letelegramme.fr/finistere/landerneau/musee-de-la-chasse-quel-tableau-au-fhel-13-06-2019-12309610.php?fbclid=IwAR0dU6gxkC5wjyaI_-HXSJlGjPxFEBTrbOk8gT5h1AnhbLVnmbEq_b0180c#uQZAkLUm4qvH8b1f.99

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[49] Ortega y Gasset, José. *Médiations sur la chasse* (1942). Québec: Septentrion. 2006. pp. 64-65.

[50] Ortega y Gasset, J. 2006. p.67.

[51] Especially in the behaviorist tradition and its rule of Morgan canon. See Despret, V. 2016. p.7.

[52] Despret, V. 2016. p.128.

[53] Mercier, T. *Happy Ending.* Carved and assembled bones. 2019.

[54] Despret, V. 2016. p.280.

[55] Reddit comment. Online. June, 12th, 2019. Translation by the authors.

[56] See Pyle, Robert M. 1993.

[57] Haraway, D. "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective " in *Feminist Studies, Vol. 14*, No. 3. Autumn, 1988. Stable URL: http://www.jstor.org/stable/3178066. p.576.

[58] Zitouni, Benedikte. " Revisiter les savoirs situés : objectivités et monde coyote ".Written text of the talk Zitouni gave during the symposium " Arts Situés ". Université de Liège. November, 13th, 2017. Accessed via academia.edu, shorturl.at/dimsw.

[59] Donna Haraway borrows this idea to Annette Kuhn, in *Women's Pictures: Feminism and Cinema.* London: Routledge and KeganPaul, 1982.

[60] Haraway, D. 1988.

[61] Zitouni, B. p.1.

[62] Zitouni, B. p.4.

[63] Zitouni, B. p.5.

[64] Baptiste Morizot used the word *désincarcérer* to describe what he has proposed to do with tracking, namely extracting or dislocating this practice from predation, which allows us to think of it as a form of attention and a geopolitical practice. See Morizot, B. 2018. p.142.

[65] About the man-the-hunter trope, and its critique in anthropology, see Lee, Richard Barry, and Irven DeVore. *Man the Hunter*. Chicago: Aldine Pub. Co. 1966. See also Haraway D, " Sowing worlds ", in *Staying with the* Trouble, 2016. pp.117-119.

[66] *Sick*: macabre, in bad taste, offensive or disgusting, physically or mentally ill ; *Sick* (slang): amazing, very good, excellent. (Source : Cambridge dictionary and Collins English dictionary).

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BIOTOPIA: The Future of Natural History Museums

BIOTOPIA is a museum for everyone: a discussion and communication-platform that brings the latest research to life, an interactive place of learning with public laboratories and diverse programs, an interdisciplinary space that bridges the gap between nature, culture, art and design. The future museum can draw on the wealth of objects from the Bavarian State Natural Science Collections like the largest butterfly collection in the world with eleven million specimens.

interviewee **Michael John Gorman**
interviewer **Giovanni Aloi**

Over the next few years, BIOTOPIA — Naturkundemuseum Bayern will be developed as a 21st century museum of life sciences and the environment under the leadership of its founding director, Professor Michael John Gorman in Munich, Germany. BIOTOPIA will take a bold new approach to engaging people with some of the most critical issues of our time. It aims to become a world-class destination for the understanding and appreciation of nature, the promotion of science communication and the dialogue between art and science. It will foster understanding of Bavarian and global biodiversity and encourage environmental stewardship. The museum will further support and coordinate a new Bavarian natural history network, with a focus on the biosciences and geosciences as well as the develoment of a nature-culture quarter at Schloss Nymphenburg where it is situated. During the current pre-opening phase, BIOTOPIA is already initiating its engagement with the public, with programmes, events and a yearly signature festival playing a key role. Beyond that, alternative venues will offer many exciting glimpses into the future museum.

Giovanni Aloi: What are your memories of visiting a natural history museum when you were a kid?

Michael John Gorman: As I child I used to love visiting the Natural History Museum in Dublin, also known as the "Dead Zoo". This museum was opened in 1857 and is a stunning example of Victoriana which has changed very little since its founding. Many of the specimens are somewhat the worse for wear, but there are also great treasures such as a wonderful collection of Blaschka glass marine creatures, and a pair of gloves made from the "golden fleece" from the Pinna Nobilis (Fan Mussel). However as a child, I knew nothing of Blaschka and was fascinated by the smell of the place, and the pitch-black skinned rhinoceros, quite unlike anything found in nature. Much later, I curated a project with artist Natalie Jermijenko in which we inserted robotic butterflies into the entomology display cases of the museum. The wings of these butterflies would gently move in the corner of your eye—a very subtle intervention designed to combine the twin Victorian obsessions of collection and reanimation. I was delighted when the wonderfully deranged gothic Netflix series *Penny Dreadful* decided to make the Dead Zoo the key location of its third series, with the Keeper of the Museum, Dr. Sweet, revealing his identity as Dracula and planning an exhibition on nocturnal animals.

Aloi: I grew up in Milan, where the natural history museum was very Victorian in essence. Dioramas and taxidermy were the main attraction. We also had a great paleontology section with fossils, bones, and reconstructions of dinosaurs. During the second half of the last century, our museum was considered one of the best in the world because of the quality of its displays and it is perhaps a good thing that it has not changed one bit since. I have visited it again a couple of years ago, for the first time, since my teenage years and I was pleased to see that Milan's museum had completely missed the child-friendly interactive frenzy that completely reshaped the natural history museum in London and many others across the world. I am more specifically referring to the introductions of colorful/cartoonish displays with flashing buttons and sound effects. Let me be controversial and call this process an "infantilization of the natural history museum" designed to attract families and promote healthy attendance numbers. What is your take on this phenomenon and how is BIOTOPIA going to pitch its displays and engagement strategies?

I believe that it is important to engage adult audiences, not only children, and also to be unafraid to bring together different disciplines to engage the public, and, in these times where science is under attack, we should be proud of being able to mobilize scientific expertise.

Gorman: I believe that the themes addressed by natural history museums, and more biological science museums and centers, are extremely urgent and important for adults. And indeed we are currently experiencing ever greater interest in environmental and biological themes from the public. Why do people consider art museums to be for adults but science museums to be for children? As Sir Neil Cossons, former Director of the Science Museum in London once put it: "When young people themselves view science as something they finished with as children, small wonder that puberty appears to be the great enemy of the public understanding of science. Science centres, set up to inspire and engage, may, in fact, be laying the ground for a conscious and forthright rejection of science by the young once they become aware of more appealing alternatives".

Natural History Museums have generally been pretty successful at attracting younger audiences — under twelves especially, in school and family groups. Some (for example the American Museum of Natural History) have become major tourist destinations in their own right, attracting audiences of all ages. Recently the Museum für Naturkunde in Berlin did an interesting experiment where they deliberately redesigned their exhibitions primarily for adult audiences and more than doubled their audience numbers, attracting significant numbers of tourists for the first time.

Natural history museums have a unique opportunity to be a public forum for informed discussion on critical current themes such as the biodiversity crash and climate change. For this reason, I think it is very important that young adults and adults feel that our museums are somewhere "for them", and not just for the under 12s. I was heartened to see some natural history museums, for example in London and Berlin, connecting with recent protest actions such as the "Extinction Rebellion" and the "Fridays for Future" and offering protesters space. This helps to keep museums relevant and show what we can bring to such discussions, by bringing together expert knowledge with an ability to create impactful public programmes and exhibitions.

Digital displays can have a place in such exhibitions when done well, but often there are attempts to add digital interactives in a cosmetic way to traditional museum displays which are not convincing. I believe that it is important to engage adult audiences, not only children, and also to be unafraid to bring together different disciplines to engage the public, and, in these times where science is under attack, we should be proud of being able to mobilize scientific expertise. But we should also organize our exhibitions around topics and concerns that are of interest to a broad public, rather than being driven by scientific categories. Some museums manage to combine edgy programming and high quality, ambitious work for adult audiences without losing their appeal for families. One needs to think about a museum-like an onion – providing powerful superficial engagement (because otherwise, you will never reach a broad audience and get people in the door), and drawing people towards ever greater "depth on-demand", whether through analogue exhibits, digital layers, or through opportunities for interpersonal conversations.

BIOTOPIA

Waxy Monkey Frog © Robin Moore

Aloi: In my opinion, our "Anthropocentric-miseducation", as I have been calling it for a few years, is largely responsible for the current environmental degradation and climate change. Our relationship with what we call "nature" starts with the wrong footing from primary school. I believe that "natural studies" and science, along with art, should be at the foundation of our learning. To enthusing children and young adults about the natural world should be seen as something essential to the wellbeing of the individual and most importantly to that of the planet. Instead, we continue to treat nature as a curiosity, a separate and sublime entity — this is an approach that we carry with us in our adult life and that leads to a lack of interest for the planet. How will BIOTOPIA educational programs engage the youth of the twenty-first century? What challenges are involved?

Gorman: I would agree that the presentation of nature as something completely separate from humans is very misleading and dangerous. Natural history museums have been very good at excluding human influences on evolution from their displays, and our profound influence on the biosphere is at best a "footnote" to traditional museum exhibits. In this regard, museums have suffered from the same disease as nature documentaries, in which there are very strong unwritten protocols in place to exclude evidence of human activity. Our false image of nature needs to change very significantly in light of the fact that 95% of mammals and birds on earth (by mass) are either humans or livestock and that chickens are by far the most common bird in the world, with around 25 billion chickens alive at any one moment. This is why BIOTOPIA focusses not on "nature", which often carries this Romantic baggage, born of the Industrial revolution, of a place unsullied by human activity, but instead on "life" as a core topic, and especially on the relationship between humans and other life forms. BIOTOPIA starts from the position that humans are completely entangled with other living systems and then aims to equip people to develop a more understanding relationship. Our events and education programmes will reflect this approach — constantly triggering encounters between human and non-human, in which the human is no longer a mere observer but fully enmeshed with other living systems.

BIOTOPIA is not just a new kind of museum - it is also the expansion and reconception of the pre-existing Museum Man and Nature at Nymphenburg Palace in Munich.

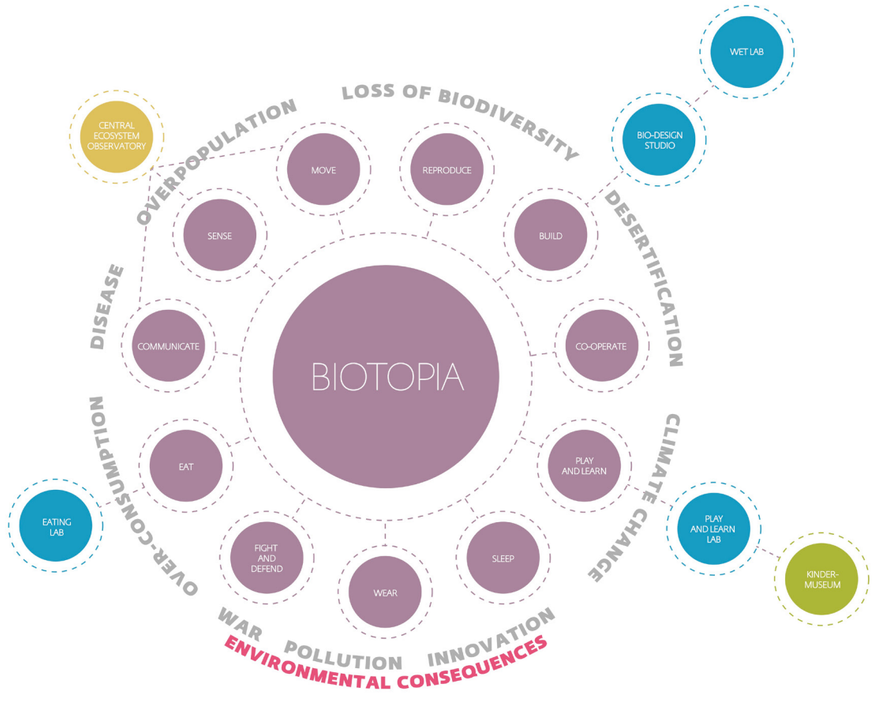
Aloi: Art has the ability to change our minds in unique ways. How can the intersection of art and science help to alter our anthropocentric-miseducation?

Gorman: Artists are the antennae of society and can sense future changes before they occur and confront us with their consequences. Art can raise questions and provoke debate, rather than providing answers, and science museums need to move away from focusing on providing answers and generating "information overload" in an age where information is instantaneously available to almost anyone who cares to look, to focusing on helping us ask the most important questions. To explore potential futures for humanity, science alone is not enough — we must bring together multiple perspectives and disciplines. Artists and designers, working with scientists, often help us to achieve a perspective-shift.

Aloi: Over the past twenty years, animals and plants have literally invaded the gallery space. From taxidermy mounts to bisected cows, herbaria, and wet specimens the phenomenon has been impossible to ignore. What do you make of this interest in the methodologies of natural history that is pervading the arts?

Gorman: Many artists are interested in twisting perspectives, and the love affair of contemporary artists with more traditional natural history displays, especially in relation to the Wunderkammer interest from Damien Hirst to Mark Dion and artists interested in the natural world such as Janet Laurence and Tessa Farmer have embraced natural history almost as a playful archeological excavation of a forgotten and arcane system of knowledge of the world. By presenting us with "wonders", they highlight the "unnatural" nature of natural history collections and provoke us to think about the human agency behind the work, sometimes, as in the case of Tessa Farmer's meticulous displays of miniature "fairies", causing a double-take as we are confronted with "visual evidence" our mental apparatus cannot parse.

BIOTOPIA is not just a new kind of museum - it is also the expansion and reconception of the pre-existing Museum Man and Nature at Nymphenburg Palace in Munich. With approximately 200.000 visitors each year, the Museum Mensch und Natur is one of the most popular natural history museums in Germany. What is going to make BIOTO-



BIOTOPIA

Behaviour Mandala © Biotopia Naturkundemuseum Bayern

BIOTOPIA

Michael John Gorman, Founding, Director, Biotopia, Photograph, Andreas Heddergott

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Quite a few museums can stimulate curiosity, only a few succeed in triggering empathy (which always involves a shift in perspectives) and hardly any are very effective in stimulating agency – encouraging action.

PIA different from the classical idea of the natural history museum?

One of the things that will make BIOTOPIA different from the classical idea of a natural history museum is that it is focused on three core ingredients: curiosity, empathy, and agency. Quite a few museums can stimulate curiosity, only a few succeed in triggering empathy (which always involves a shift in perspectives) and hardly any are very effective in stimulating agency — encouraging action. These three things permeate through all BIOTOPIA activities. The framework for the long term (I hesitate to use the word "permanent") exhibition of BIOTOPIA is organized around behaviours, activities, and processes that link humans and other organisms, such as EAT, SLEEP, MOVE and COMMUNICATE. These themes are designed to bring visitors into an exploration of what we share with other species, and also to allow us to reflect on ourselves as biological entities. We are happy to build on a strong reputation of Museum Mensch und Natur, which is a much-loved museum in a wonderful location at Nymphenburg Palace in Munich. The central concept of "Mensch und Natur" – the relationship between humans and nature – remains a central concern of BIOTOPIA, although expressed in a different form.

Aloi: In 2012, you founded the Science Gallery International, and before that, you were a Lecturer in Science, technology, and Society at Stanford University. What brought you to found BIOTOPIA?

Gorman: After founding Science Gallery in Dublin in 2008, and then Science Gallery International (developing a global network of university linked galleries bridging science and art), I became interested in a new challenge. I was approached by the people driving to establish a new Natural History Museum in Munich and was interested in the exciting and important challenge of reinventing the natural history museum for the "biological century", as Craig Venter has termed the 21st century, and this attracted me to the opportunity to help shape this new museum.

Aloi: I have noticed that you have already been awarded more than one design prize and that Paola Antonelli, curator in the Department of Architecture and Design at MoMA is on your board of advisors. What role are art and design going to play in BIOTOPIA?

Gorman: It is interesting that, in 2019, we have seen such a proliferation of design exhibitions focussing on nature and living systems. For

BIOTOPIA
Biotopia Hautnah Festival, Photograph Andreas Heddergott © Biotopia Naturkundemuseum Bayern

example, in New York there is the Cooper Hewitt Triennial Nature, in Milan, there is the Triennale Broken Nature curated by Paola Antonelli, in Paris at the Centre Pompidou there was the exhibition La Fabrique du Vivant earlier this year. We are experiencing a new wave of biophilic design and designers exploring the potentials of biological materials. Conversely, if we want to engage the public with biology, design provides a way to highlight the relevance of biology to addressing human and environmental problems. Artists working with biology often highlight key ethical and social issues relating to the redefinition of life in the 21st century through synthetic biology and other technologies, or sometimes give us a new perspective on other life forms, as in Tomas Saraceno's work with spiders. BIOTOPIA will include a Bio Art and Design Studio, with an associated residency programme, where the public will have the opportunity to experiment in this fertile territory. We also plan to integrate design projects, artworks, and commissions in our exhibitions and events. We have already done this in our initial festivals.

Aloi: What role is scientific research going to play at BIOTOPIA?

Gorman: BIOTOPIA plans to be a platform for engaging the public with current scientific research in life sciences and the environment. We do this through partnerships – we have just signed a new cooperation agreement with the Max Planck Gesellschaft, and also have strong existing partnerships with the SNSB (Staatliche Naturwissenschaftlichen Sammlungen Bayerns) and LMU Munich, and are cooperating with many other research institutes and universities. I believe that BIOTOPIA's role is to help to mediate between current research and the public, by showing the relevance of scientific research to topics people are interested in and bringing the experts in. It is important to me that BIOTOPIA has a dynamic relationship with current research – many museums have strong research input at the beginning, but then this becomes fossilized – to keep BIOTOPIA as a forum for current science, we need ongoing strong partnerships. Some of these will relate to BIOTOPIA's open labs – for example, our Neuro Lab will be a partnership with the Munich Centre for Neuroscience, and we will also have a BioLabor including an S2 area, which we hope will also be a space used by the Munich iGEM teams who are world-leaders in the exciting area of synthetic biology. We also want to be a place for the discussion of the future direction of life sciences research with the public, and ourselves a place for research on Life Sciences in Society, which is my Chair at LMU Munich.

Aloi: What's your favourite natural history museum and why? What is special about it?

Gorman: Many of the more famous natural history museums are places that I admire professionally but often where I would not personally choose to spend a free afternoon, due to too many screaming school children and a dizzying sense of vastness that is exhausting even to contemplate. As Irish poet Patrick Kavanagh put it "through a chink too wide comes in no more wonder" and museums that oversaturate can tend to kill curiosity rather than cultivate it. Places that I particularly enjoy are the Musée de la Chasse et de la Nature in Paris, which has used art to create a very striking museum of hunting. I also love the unashamedly traditional Galerie de la Paléontologie et de l'Anatomie Comparée in Paris — for the extraordinarily powerful aesthetic experience. I like Micropia in Amsterdam, for a new take on the concept of a natural history museum through creating a "zoo for microbes". I like aspects of the California Academy of Sciences in San Francisco, particularly the rain forest installations and the architecture. But I have a special love for coming across hidden historical collections – for example, I was delighted to discover the Vogelsaal in the Natural History Museum of Bamberg, a beautifully preserved collection from the 18th century. Or trips behind the scenes to see the neglected objects in the museum stores in the company of curators, whose stories always seem so important in bringing the objects to life.

Prof. Dr. Michael John Gorman is Founding Director of BIOTOPIA – Naturkundemuseum Bayern, a new museum linking life sciences, art and design in development at Schloss Nymphenburg in Munich, and University Professor (Chair) in Life Sciences in Society at Ludwig-Maximilians-University Munich. Previously Michael John was Founding Director of Science Gallery at Trinity College Dublin. In 2012 he founded Science Gallery International with the goal of bringing Science Gallery experiences to a global audience. Prior to founding Science Gallery, Michael John was lecturer in Science, Technology and Society at Stanford University and has held postdoctoral fellowships at Harvard University, Stanford University and MIT.

Richard Pell

Transgenic Blue Carnation, anaglyph specimen photo, 2014 © Richard Pell

The Center for PostNatural History

The Center for PostNatural History in Pittsburgh focusses on the collection and exhibition of organisms that have been intentionally and heritably altered by humans by means including selective breeding or genetic engineering, a phenomenon referred to as the postnatural. The Center is "dedicated to the advancement of knowledge relating to the complex interplay between culture, nature, and biotechnology", whose mission is "to acquire, interpret, and provide access to a collection of living, preserved, and documented organisms of postnatural origin".

interviewee **Richard Pell**
interviewer **Giovanni Aloi**

For millennia human beings have harnessed domestication, selective breeding, and more recently, genetic engineering to dramatically alter the morphology and behavior of the living world. These changes are often culturally specific: windows into unspoken human desires and fears, the culture within nature. The "postnatural," refers to anthropogenic interventions into evolution that are both *intentional* and *heritable*, regardless of potential subsequent unintentional consequences. The postnatural is a conceptually inclined adjective used to describe the purposeful and permanent modification of living species. And it happens in stages.

Stage One: Habitat Control

Postnatural changes begin when humans take responsibility for the habitat of another species. By cohabiting or building a fence to protect it from predators, humans modify the "natural" selection pressures on the organism. This allows for physical traits and behaviors to emerge that would quickly be selected out in the wild. For example, animals bred in captivity are far more likely to express the stark white fur of albinism than their "natural" or wild counterparts.

This whiteness is perhaps most iconically embodied by the white laboratory rat. Its origin story is a microcosm of all things postnatural: By the early nineteenth century, rats were plaguing large cities like London and New York. The association of rats with the plague was still heavy in the public consciousness, and rat-catching and killing had become a viable career option. The captured rats were used in a blood sport known as rat-baiting. In dark taverns, men would gather around a large wooden pen and bet on how long it would take for a dog to kill 100 rats. Developed as an entrepreneurial rat abatement strategy, the sport proved so popular that it inadvertently created a cottage industry in rat breeding, perhaps the first time in history that rats were intentionally bred in captivity. Occasionally, an albino rat would be born and set aside as an oddity. In the wild, stark white fur against a dark ground makes an easy meal for a predator, but in the postnatural habitat of a rat breeder's care, the sheer novelty of an albino specimen could help save it from the dogs.

Stage Two: Reproductive Control
It wasn't long before the outwardly "clean" white rats had shed their cultural association with filth and the plague and transformed into pets in the homes of Victorian women who rebranded them as "fancy rats". The popular nineteenth-century activity of "rat fanciers" fetishized the aesthetics of novel coat colors and patterns that emerged from the "mixing" of black, brown, and albino rats. It is these populations of selectively bred rats that become the foundational stock of the genetics research labs of the 20th century.

Selective breeding dramatically accelerates postnatural change. By breeding plants and animals in captivity, humans play a curatorial role in the reproductive life of other species. Purebred dogs are an especially visible example of this phenomenon, with traits that were once subtle signifiers of a cherished breed 100 years ago which rapidly became cartoonish exaggerations of themselves. Eugenic concepts of racial purity persist among some dog breeders who will cull or sterilize dogs that do not exhibit all of the textbook traits that have been assigned to the "pure breed". In some cases, highly awarded inbred traits put the basic health of the animal at risk. For example, the skulls of English Bulldogs have grown to such an extent over the last hundred years that most females can only give birth through caesarean section.

Human intentionality is a blurry construct, accompanied as it is by all the conflicts and internal contradictions that emerge from the interpretation of cultural work..

Stage 3: Genetic Engineering
With the advent of genetic engineering in the late twentieth century, the rate of postnatural change underwent a dramatic increase. No longer limited to emergent mutations or constrained by the realities of breeding, scientists were able to directly manipulate organisms' DNA. One of the first techniques developed was the ability to turn an individual gene "on" or "off". Still a common practice, "knocking out" a gene is useful in beginning to understand what the function of an individual gene is. While the vast majority of single-gene changes do not manifest in a visibly altered organism, genes that influence pattern formation in early body development can have a dramatic effect on the appearance of an organism. For example, in the lab of Dr. Moisés Mallo in Portugal, developmental pattern formation genes, known as HOX genes, were altered in embryonic mice, with wildly diverging results.

Postnatural changes are a product of a complicated renegotiation between human desire, the autonomous vitality of living organisms, and simple contingency. It is impossible to predict with any degree of specificity what the consequence of any single action will be. It is also impossible to separate the changes made to an organism's biology from the resulting changes to its larger ecology. They continually create one another, with human desire as the fuel in the engine, or the nitrogen in the soil.

Human intentionality is a blurry construct, accompanied as it is by all the conflicts and internal contradictions that emerge from the interpretation of cultural work. This situates the postnatural outside the realm of pure science, veering into the zone of human culture. If we were to propose a place in the library to locate the postnatural, it would not be alongside ecology, biology, or even the Anthropocene; instead, it would be distributed throughout: alongside books on textiles, architecture, engineering, military history, agriculture, design, religion, sports, music, art, and erotica. It is one of the oldest forms of cultural production, present in our stone-age

Richard Pell
Center for PostNatural History, museum, 2012, photograph: Dror Yaron © Richard Pell

cave dwellings, our rented apartments, our organic vegetable gardens, and our industrial plantations. We cannot avoid it any more than we can avoid ourselves.

Giovanni Aloi: Richard, how would you best describe The Center for PostNatural History to someone who has never heard of it?

Richard Pell: The Center for PostNatural History is an independently run museum that focuses on living organisms that have been intentionally altered by humans in a way that influences their evolution. That simply includes every domesticated plant or animal; every farm animal; every research organism; and nearly every pet, fruit, vegetable, and decorative flower. This covers a huge range of life forms that are generally missing from Natural History Museums, hence the name PostNatural History. While this may at first seem like an arbitrary subset of the overall tree of life, we argue that it is a deceptively telling blindspot. These are the living things that tell us most about ourselves and our culture. We look at them as we would the architecture of an unknown civilization and attempt to interpret what they say about the desires and fears of those who influence them.

Aloi: When did you become interested in Natural History?

Pell: As a child, I was drawn to the scale of the blue whale in the American Museum of Natural History, and the African Elephant under the great dome of the Smithsonian National Museum of Natural History. They carried the incontrovertible weight of authority and truth that might come with entering a cathedral. The meaning of these aesthetic choices was not complicated for me until much later. As an adult, I had mostly ignored the life sciences in favor of a critical practice around engineering. What brought me back to biology was in 2004 hearing engineers talk about "programming" cellular "devices" using genetic "parts". The emerging field of Synthetic Biology combined all the reductive metaphors of engineering with a gung-ho attitude towards reshaping life itself. It was provocative, anxiety-inducing, and at times even hopeful. And while the headlines were filled with dueling narratives of Franken-Food versus Feeding-The-World, it struck me that none of our cultural institutions were taking up the mantle of facilitating our understanding of this new terrain. The more I looked, the larger this blindspot appeared to be. It not only included new genetically altered organisms, but also the whole history of their earlier domestication. It seemed that the more that human manipulation was a factor in the evolution of a life form, the less likely it was to be found in a natural history museum or zoo. Once the thought that a new kind of natural history museum was needed entered my mind, it never left.

Aloi: The Center for PostNatural History is concerned with more than the classical conception of Bio Art. Your practice seems to be fundamentally concerned with institutional critique as well as with the epistemological value of display and media. How did this approach to art-making develop?

Pell: I come out of an interventionist tradition that accepts the world as its own ready-made venue and prefers audiences that don't arrive pre-sorted. My favorite artworks never identify themselves as such. Rather, they have to be dealt with on their own terms. Whatever concerns or emotions that they inspire cannot be easily dismissed as part of a general aversion to "art". I consider my artistic ancestry to be with hackers, Situationists, street theater, pranksters, tactical media, anarchists, activists, protest movements, and oddity museum evangelists.

In my earlier work with the Institute for Applied Autonomy, we chose to focus largely on engineers as our audience and produced a series of functioning anti-authoritarian technologies that we would present within academic conferences. We wanted engineers to consider their own agency and complicity in the tools that they bring into the world. This was in the late 90's and early aughts, just before the beginnings of drone warfare. It was a form of institutional critique that was almost entirely production based: Robotic graffiti writers; Inverse-surveillance systems; Tools for large-scale protests. These tools commented on the world but also had to actually work as advertised. Our mantra was: "Our shit works".

Then I learned about Synthetic Biology and the gap between what people imagine is happening in the lab versus the reality. At that point, the general strategy of embodied critique persisted, but the tactics shifted from radical engineering to radical contextualization. Groups like the Center for Land Use Interpretation and the Museum of Jurassic Technology were hugely influential to me in making this transition.

Richard Pell

Pug Dog, anaglyph specimen photo, 2014 © Richard Pell

Aloi: Are you interested in Bio Art of the kind practiced by artists like Eduardo Kac or Suzanne Anker?

Pell: Not particularly.

Aloi: In the exhibition *Specters of the PostNatural,* a series of ste-

reoscopic anaglyph photographs of specimens from the Center for PostNatural History allowed the postnatural to be viewed in an entirely new scale. The images in the show were simultaneously beautiful and haunting. Can you tell us about your relationship with beauty and the role it plays in your work? What ethical questions are raised in this context?

Pell: We are always trying to use aesthetics in the service of narrative and avoid the aestheticization of the subject matter itself. Beauty can be important in drawing a person in to pay attention to something they might otherwise ignore or avoid. It should never be used to distract from the gravity of the matter. It's a strange cocktail we are offering, this mixture of wonder and criticality. Beauty can sweeten an otherwise bitter pill. But it also gives one permission to stare. We are inviting people to give their attention to subjects that often appear boring or revolting. Towards that goal, we use visual and auditory experience to pull a person into the depths of a paradoxical cultural moment, without resolving it. People are left with an often incomplete narrative. A puzzle missing a few pieces. If they are lucky, a visitor leaves with some nagging, unresolved questions. There is work to be done.

As we come across a reference to a postnatural organism in the news or a research paper, we track down the people involved and contact them directly.

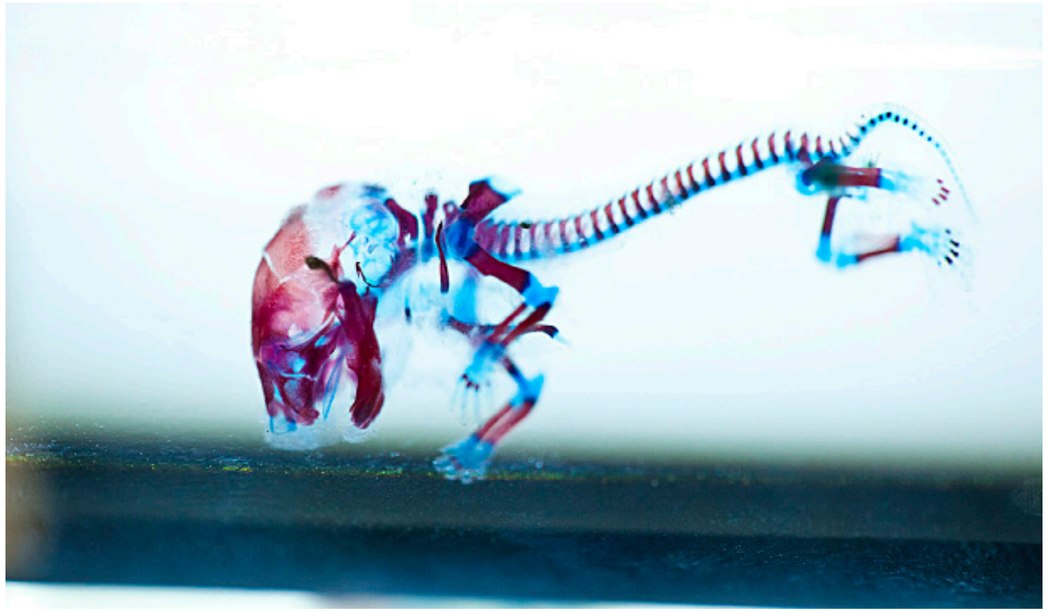
Aloi: You said: "If a plant or an animal has had a close relationship to humans it's usually not in the natural history museum. It's kind of considered to be not quite natural, it doesn't answer questions about habitat or ecology that a natural historian is interested in, so they get relegated to the basement." It seems to me that the idea of nature, as conceived and culturally passed on by the institution of natural history, is very deeply rooted. I don't mean to be facetious, but the naturalization of the idea of nature is an impressive cultural accomplishment. How do visitors to the Center for PostNatural History react to the realization that nature is not quite what they thought it was?

Pell: It's an idea that is so simple that it can take a while to set in. There's still an expectation that we must be describing something rare and exotic. Some people have a hard time adjusting to the idea that our pet dogs and the chicken we buy in the supermarket are not only radically different from their wild ancestors but that they are highly culturally specific. Yes, every dog. Yes, every chicken. Each is the culmination of a series of multi-generational contingent value judgements. They reflect a soup of human aesthetic, utilitarian and economic choices. I think that's when the idea of the postnatural becomes meaningful. When you stop looking for the obvious freak-creation and can stare at a factory-farmed chicken and see how it manifests the extraordinarily culturally specific desires of late capital: Breasts so large the hens nearly tip over; Inbred for maximum uniformity of size so that they fit the machines; Accelerated reproductive cycle. These are qualities that no individual requested yet are still undeniably our own.

Aloi: How do you acquire the specimens in the collection of the Center for PostNatural History?

Pell: Generally, we source them directly from the people who are involved in their lives: Research labs, farms, and hobby breeders. Our budget is limited so we rely largely on donations. As we come across

Richard Pell
Alcoholic Rat, 2012, Heather Mull © Richard Pell



Richard Pell

HOX Modified Ribless Mouse from the lab of Dr. Moises Mallo, 2012 © Richard Pell

a reference to a postnatural organism in the news or a research paper, we track down the people involved and contact them directly. People are almost always willing to help once they see what we are about.

Aloi: You were invited to co-curate, with Honor Beddard, one of the galleries of the *Making Nature* exhibition held at Wellcome Collection London in 2016-17. Some of the objects on display were borrowed from the Center for PostNatural History. Can you tell us about a few of the objects selected for the show and how they were chosen?

Pell: One of the highlights of our collection that we sent over, is undoubtedly the Alcoholic rat. Bred initially as part of a study in the treatment of alcoholism by the Finnish government, these rats were given the choice between alcohol and water, and those with an affinity for booze were then bred to propagate and magnify the trait. After several generations, they had an animal that from birth would choose alcohol over water every time. Another was our HOX modified ribless mouse (our photograph of this one appears in the new Phaidon book you co-edited, *Animal: Exploring the Zoological World*). This mouse was produced in the lab of Dr. Moises Mallo who studies the function of developmental HOX genes. In this mouse embryo, a single HOX gene was turned off and as a result, the mouse did not form any ribs. The specimen is stained so that the skin is transparent, and the bones are blue. It is among the few genetically modified animals in our collection that have been changed in a visible way. Lastly, we have a historic specimen.

One of the earliest successful experiments in synthetic biology. "Hello World" is a proof of concept in the development of a photosensitive bacterium, one that produces a visible pigment in response to light. In this case, the words "Hello World" were projected in Helvetica lettering onto the bacterial film which was permanently preserved in acrylic. The phrase is commonly used by computer programmers who are learning a new language and for our purposes, serves as an artifact of the merging of computer science and molecular biology.

Aloi: Over the past twenty years, natural history museums have changed dramatically. In 2004, I interviewed researchers from many natural history museums around the world to ask about thdisappearance of entomology cabinets in public displays. Researchers vented their discontent for the seeming "trivialization" of museum exhibits that favor interactive multimedia displays designed to engage younger audiences. This tendency could be at least in part interpreted as a symptom of a broader crisis—the institutional awareness that the classical model of the natural history museum is conceptually obsolete and the struggle to reinvent it? But the "fun-house" approach of current displays doesn't quite seem to work. In your opinion, what does the future of natural history museums hold?

Pell: For us, the reason that natural history museums are struggling is not that they are insufficiently entertaining, but ironically that they have failed to evolve. They have ignored the causal factor in one of the most seismic shifts in recent evolutionary history: us. In an effort to chronicle the natural world in its pristine untouched state, they systematically edited out the evolutionary role that human intention plays. The presence of domesticated plants and animals is treated as a contaminating factor: boring at best, or bad data at worst. In doing so, they are often left with a collection and exhibition framing that is ill-equipped to address the issues that might be most relevant to the visitors of today: The food we eat; the origins of our pets; the relationship between global commerce and invasive species; the emergence of new pandemics via factory farming; the realities of biotechnology; and strategies of intentional extinction. This may be changing. In the decade or so that we have existed, we have been increasingly invited by natural history museums to look at their collections and help them see how objects and specimens already in their collections may contain powerful narratives of the postnatural that are relevant to their visitors.

For us, the reason that natural history museums are struggling is not that they are insufficiently entertaining, but ironically that they have failed to evolve. They have ignored the causal factor in one of the most seismic shifts in recent evolutionary history: us.

Aloi: In 2008, the exhibition *Transgenic Organisms of New York State* proposed an alternative evolutional history of adaptation in which the "organism's genetic makeup has been altered for a human purpose, carrying with it the expression of a specific human desire". Today's transgenic technologies have come under heightened scrutiny because of the implementation of controversial CRISPR technologies. What is your take on the subject?

Pell: As far as I can tell, CRISPR mainly brings two significant changes to the table, one by degree and one by kind. The first is simply speed. The previous methods of genetic modification involved a huge amount of unpredictability. There was no reliable way to know exactly where within the genome an inserted gene would be incorporated.

Richard Pell

PostNatural Organisms of the European Union, 2013 © Richard Pell

As a result, to create a single successfully modified organism, hundreds or thousands of unsuccessful embryos had to be produced. CRISPR makes that part much more predictable, and apparently with less "off-target effects". Yes, this is certainly much more efficient, but as the late Paul Virilio would remind us: speed and power go hand in hand. Hold on to your hat.

The other shift that CRISPR introduces is the possibility of performing genetic modifications on an adult organism. Previously most of these changes were introduced at the single-cell stage and would necessarily be a part of the organisms' germ-line if they were successful. This is still a bit in the realm of speculation, which we try hard to avoid, but CRISPR opens the possibility, for instance, of meaningful gene-therapy in humans. Some genetic conditions involve a single broken gene that could benefit from this enormously. The problem with such a technology being cheap and easy to use is that it becomes the go-to tool for solving every problem. For example, strategies in intentional extinction, such as the gene-drive modified mosquitoes are only going to be more common and even less democratically considered. We also expect the coming era of self-experimentation in gene modification to go from cool, to gross and tragic fairly quickly. Selfishly, we wonder if our collection will be able to keep up.

Aloi: What's in the future of the Center for PostNatural History?

Pell: After a decade in operation, we don't have a lot of competition. However, there's no reason to expect matters to remain that way. Natural history museums, with far more resources than ours, are beginning to show interest in some of these issues. We fully expect that the biotech industry will be increasingly interested in telling their own story on their own terms. However, we remain independent and so are uniquely able to tell any story we like. We expect our collection to continue to grow.

Richard Pell is the founder and director of the Center for PostNatural History, an organization dedicated to the collection and exposition of life-forms that have been intentionally and heritably altered through domestication, selective breeding, tissue culture or genetic engineering. The Center for PostNatural History operates a permanent museum in Pittsburgh, Pennsylvania, and produces traveling exhibitions that have appeared in science and art museum throughout Europe and the United States including the Victoria and Albert Museum and Wellcome Collection in London, the Museum für Naturkunde in Berlin, the CCCB in Barcelona, the ZKM in Karlsruhe, the 2008 Taipei Biennial, and the Carnegie Museum of Natural History as well as being featured in National Geographic, Nature Magazine, American Scientist, Popular Science, and New Scientist. The CPNH has been awarded a Rockefeller New Media Fellowship, a Creative Capital fellowship, a Smithsonian Artist Research Fellowship, and received generous support from Waag Society and the Kindle Project. Pell was awarded the 2016 Pittsburgh Artist of the Year. He is currently an Associate Professor of Art at Carnegie Mellon University.

Lex Thompson
On the Plains and Amongst the Peaks III (Screen Test), wallpapers, portrait studio backdrop, projection screen, digital projection of specimen photos, 2019 © Lex Thompson

The Unbearable Impermanence of Things

In the fall of 2019, the University of Denver mounted the exhibition The Unbearable Impermanence of Things*, featuring work by contemporary artists whose projects incorporate ideas and aesthetics from nineteenth-century naturalism and natural history. Drawing on the past, these artists focus on the pervasive yearning to preserve nature in the face of inexorable change and decay. Through their exploration of these themes, the artists problematize the near-universal desire to create stable understandings of phenomena that are ever in flux.*

in conversation: Vicki Myhren Gallery Director, **Geoffrey Shamos,** and curator **Libby Barbee**

The *Unbearable Permanence of Things* was exhibition curated by adjunct DU professor and artist Libby Barbee. It presented work by contemporary artists whose projects incorporate ideas and aesthetics from nineteenth-century naturalism and natural history. The featured artists focused, in particular, on the pervasive yearning to arrest and preserve nature in the face of inexorable change and decay. In representing the impermanent as stable, the study of nature became an antidote to mortality. Through their exploration of these themes and tropes, the artists demonstrated and problematized the near-universal desire to create stable understandings of things and phenomena that are ever in flux. Vicki Myhren Gallery Director, Geoffrey Shamos, and curator Libby Barbee sat down to discuss the show's genesis and underlying themes.

For us, it seemed like a great opportunity to consider the broader historical context of nineteenth-century naturalism and how similar themes and issues reappear in contemporary art.

Geoffrey Shamos: This exhibition initially emerged from conversations with the Minnesota-based artist Lex Thompson, who has spent several years completing work related to Martha Maxwell, a fascinating figure who moved to Colorado in the mid-nineteenth century. She was an innovator in taxidermy and created habitats for her work, including a large-scale mountainscape for the 1876 Centennial Exhibition in Philadelphia, a decade before the diorama movement took off in natural history museums across the world. Thompson, who has explored Maxwell's life and work from many angles and in a variety of media, was eager to exhibit in Denver. For us, it seemed like a great opportunity to consider the broader historical context of nineteenth-century naturalism and how similar themes and issues reappear in contemporary art. To curate the show, I brought in Libby Barbee, a local artist whose own work examines the interplay between nature and culture, especially in the Western United States.

Libby Barbee: The focus of Lex's work is centered on nineteenth-century natural history, and the aesthetics he uses are pulled from this era. I was interested in looking at how artists today are using the tropes of nineteenth-century naturalism to represent contemporary ideas about nature, knowledge, and the place of humans in the natural world. I was also interested in how Lex's work, and the work of other contemporary artists, differ from the philosophical underpinnings and general world view of those earlier naturalists.

The concept of impermanence and the desire to preserve ephemeral objects and bodies became a secondary theme structuring the exhibition. Impermanence and mortality, both in a physical sense and in the sense of a life's work or a body of knowledge being lost to memory, are very important in Lex's work. Of course, there is the intrinsic issue of mortality that emerges with taxidermy in general, since it is a preserved animal skin. But within Lex's work, there is also the issue of trying to preserve the memory and history of naturalist Martha Maxwell. Many of the other artists in the exhibition are equally concerned with the struggle and desire to preserve memories, histories, or objects.

Geoffrey: In addition to Maxwell, the exhibition evokes figures like John James Audubon, whose Birds of North America stands as a monumental opus of nineteenth-century naturalist study. Through the collection of the university library, we were able to include several volumes of Audubon's work in a case at the entrance to provide historical context. I also think of Charles Wilson Peale, who painted portraits of the founding fa-

John McEnroe

The Epic of America, book and resin, 2011 © John McEnroe. John Jame Audubon, Birds of America, Color lithographs of drawings by John James Audubon, New York: J.J. Audubon, 1840, University of Denver Special Collections

Cabinet containing work of John McEnroe and John James Audubon, image courtesy of WM Artist Services

Megan Gafford

Hormesis, uranium, subatomic particle detector, video projection, 2016 © Megan Gafford

photo courtesy of WM Artist Services

Rebecca Vaughn

Not See Me Works Into Her, 20 foot extension ladder, rotating emergency beacon lights, dc motors, AM radio antennae, knitting needles, motions sensors and the golden chalice vine, 2018-2019 © Rebecca Vaughn

Gabriel Ricco

Oda II (from the series "El horóscopo de Jesús [Dan, Richard & Joseph]"), 2019 © Gabriel Ricco

thers but also opened one of the earliest natural history museums in North America. His son, Titian Ramsey Peale, was an avid lepidopterist who painted stunning watercolor renderings of the butterflies in his collection. As artist-naturalists, these men were obsessed with collecting perfect specimens and preserving them through art and display for the enhancement of knowledge. While the themes and aesthetics recall this earlier period, the artists in the show call into question the larger aims and operations of nineteenth-century naturalism.

Libby: With Lex's work, we can see that there is a Russian nesting doll-like approach to preservation and history. On this first level is Martha Maxwell's work itself, which was preoccupied with preserving specimens through taxidermy. But on the second level, is Lex's attempt to preserve (often through recreation) the life and work of Martha Maxwell. Here there is also a slippage in that recreation- and Lex highlights this through his use of greenscreen throughout the work. In this slippage are all kinds of inferences about the fallibility of history and knowledge, and about our relationship to a rapidly changing natural world.

This is something that we see come up in a lot of the works that are included in the exhibition. Whereas nineteenth-century naturalists were concerned with creating a cohesive and consistent view of the world- a sense of permanence and knowledge that transcends time. The artists that we invited to participate in the exhibition are dealing with issues of impermanence and are calling into question the reliability of science in a world that is rapidly changing in large part due to human activity.

The teleological understanding of time that underpins modern thought and proposes that technology and understanding will progress forward, gives way to a more nuanced and ambivalent understanding of our ability to understand the world.

Geoffrey: Many of the projects in the exhibition highlight that fraught dynamic between preservation and destruction, which was also present, though hidden, in the nineteenth century. Whether it's taxidermy specimens or particular habitats, collection and display required the removal of examples from nature, often with the purpose of preservation for posterity. Audubon had to shoot his birds before painting them, and Henry Perrine, the nineteenth-century naturalist at the center of Mark Dion's prints, helped document the plant-life of the Florida Everglades while simultaneously encouraging agricultural development of the wetlands. Creating public knowledge and awareness could also lead to destruction as more and more people sought their own naturalist experiences. Mia Mulvey's 3D-printed salt and charcoal installation presents impressions taken from an ancient sequoia tree, the location of which remains secret to prevent visitors from loving it to death.

Libby: Similarly, Sarah Wallace Scott draws directly from the work of John James Audubon in her Displaced: Birds of America to highlight the human destruction of natural habitat. To create these photographs, she modeled paper birds after Audubon's depiction of the "Great Northern Diver" and placed them into a variety of existing landscapes around her home. Much like museum dioramas from the late 1800s and Audubon's watercolors from Birds of America, her work attempts to duplicate the wonder of an intimate encounter with a "real" creature in its habitat. The substantial difference is that she has presented these animals' habitats not in some distant untouched land, but in our existing world.

Geoffrey: I'm also intrigued by the relationship between past and present in Megan Gafford's Hormesis, a two-channel video installation showing close-up images of uranium rocks with radioactive particles shooting through clouds and a pedestal with actual uranium samples in a bell jar. For me, the work calls to mind notions of the nineteenth-century sublime — a terrifying, awe-inspiring beauty that quickens the heartbeat through the perception of danger. It's Caspar David Friedrich's famous Wanderer above the Sea of Fog for the radioactive age.

Libby: Gafford's work also brings up a number of philosophical and ethical questions that, in many ways, undermine nineteenth-century faith in human progress through science. By aestheticizing this dangerous material, she asks the viewer to suspend ethical judgement for the sake of art — much in the same way that public confidence in scientific progress has historically overridden our ability to consider its potentially horrific outcomes. The development of atomic weapons drastically changed the way that we consider the potential benefit and risk of scientific exploration. Nineteenth-century optimism about the potential of science was to varying degrees shattered in the twentieth century by the devastatingly destructive power of atomic energy. Megan's work asks viewers to ponder the question "Can the yearning to understand undermine humanity?"

In the end, when we follow the threads of these contemporary takes on nature, we come around full circle to an almost premodern (and undeniably postmodern) take on nature. The teleological understanding of time that underpins modern thought and proposes that technology and understanding will progress forward, gives way to a more nuanced and ambivalent understanding of our ability to understand the world. Nature is again this mysteriously veiled object that we can't quite grasp or understand, or perhaps even more unsettling, nature is a mercurial stage on which we play out our human desires and prejudices. Only now, I would argue, the stakes are much higher than they have ever been. Living on a planet that is undergoing major climate change, and facing potential ecological collapse, can we cling to a belief that technology and human knowledge will prevail? Or do we, like the artists in this exhibition, accept that our human understanding of nature and our place within it is limited and our actions are too often directed by our irrational human tendencies?

The Unbearable Impermanence of Things
Vicki Myhren Gallery at the University of Denver
September 12 - December 1, 2019

Artists: Richard Barnes, Mark Dion, Megan Gafford, Conor King, John McEnroe, Mia Mulvey, Renée Rendine, Eileen Richardson, Gabriel Rico, Sarah Wallace Scott, Cole Swanson, Lex Thompson, Rebecca Vaughan, and Ashley Williams

Libby Barbee is an artist, curator, and arts administrator based in Denver, Colorado. She received a BA in Art History and a BFA in Painting from Colorado State University, and graduated from Maryland Institute College of Art with an MFA in interdisciplinary art. She is the Regranting Manager at RedLine Contemporary Art Center where she oversees grant programs that fund the arts across Colorado, teaches Drawing at the University of Denver, and creates artwork that explores our human relationship to the natural world, specifically focusing on Frontier Myth and the American West.

Geoffrey Shamos is the Director at the Vicki Myhren Gallery and Curator of the University Art Collections at the University of Denver. He graduated from Yale University and received his doctorate degree from the University of Pennsylvania, where he specialized in Renaissance art from Northern Europe. He has worked at the Yale University Art Gallery, the Cantor Center for Visual Art at Stanford University, the Metropolitan Art Museum, and RedLine Contemporary Art Center. At the University of Denver, Geoffrey engages with students and faculty, plans exhibitions and programs, and helps grow the university's art collection.

Radicle Stories

Using the visual metaphors of natural history, artist Katerie Gladdys and sustainability local food activists, Anna Prizzia and Melissa DeSa of the Southern Heritage Seed Collective created an interactive and interpretive road show-style performance and a portable, electronic cabinet of curiosities filled with seed specimens of regional heritage fruits and vegetables and images printed on glass slides and interactive video. Seed Cabinet includes facts but seeks to "resemble" the discourse of science" as a way to share information about and problematize seeds inviting the audience to dig deeper realizing their role in both global and local food systems. (A radicle is the initial root structure or rootlet to emerge from a seed)

text and images: **Katerie Gladdys and Anna Prizzia**

Much of Katerie's artwork has to do with plants and agriculture, employing narratives and histories about plants as told by humans, as well as describing her direct experience with plants and soil as a means of interfacing with the vegetal and microbial world. As part of her practice, she asks questions such as: how can I cultivate the act of noticing and facilitate the development of attending differently? What does it mean to be in conversation with another species, particularly plants? What are the potentials for a conversation that extends beyond the academy and science discourse?

Katerie's world view has been shaped by the notion of natural history, remembering a childhood garden of native plants "rescued" from a forest destined to become a suburban subdivision. Subsequently, she learned their names by comparing their physical forms to illustrated morphologies of color and shape in her family's field guide to wildflowers. She also recalls the occasional field trip to the natural history museum. Like reading the field guides, part of the experience was textual. The label copy associated with each exhibit related facts including the common and scientific name, geographic origin, the name of the collector and perhaps the specimen's utility to humans. Viewing dioramas of taxidermic animals and the plastic and glass models of plants isolated, organized and transformed the natural world into specimens, presented in finely crafted glass vitrines that felt more like furniture than habitat.

Anna collected seeds as a child, treating them as precious jewels placing them in enamel boxes and velvet pouches. The shapes, textures, and infinite variation captured her imagination and provided the foundation for elaborate games. As a young adult, Anna rediscovered these forgotten seeds through her love of biology. She appreciated the intricacy and complexity of seeds observing how genetic material condensed into a tiny seed was revealed in the growing plant.

Anna reveres the physical beauty of seeds and celebrates their utility. Seeds function as both objects and information. She believes that seeds are the foundation of our food system. Anna co-founded the Southern Heritage Seed Collective and sees seeds as a

Katerie Gladdys

Right: *Seed Cabinet,* card catalog, glass slides, resin, seeds, custom electronics, video, 2018, Photo Paden DeVita

Katerie Gladdys

Seed Cabinet, card catalog, glass slides, resin, seeds, custom electronics, video, 2018, Photo Paden DeVita © Katerie Gladdys

Katerie Gladdys

Seed Cabinet, cow pea drawer detail, card catalog, glass slides, resin, seeds, custom electronics, video, 2018, Photo Paden DeVita © Katerie Gladdys

common language; inspiring our community to understand seeds as repositories of our memories. The work of saving seeds is recording this history and preparing for the future by collecting the knowledge of climate, soil, culture, and taste. Preserving these traditions through seed saving makes our citizenry more adaptable and resilient. Protecting seeds, the values and the narratives of the places where they grew and the people who grew them become a dynamic natural history of the plants in our community.

Like these early experiences with seeds, native plants, and the natural history, our work on the collaborative project *Seed Cabinet* considers how the construct of natural history informs the work's physical form, methodology of making, and presentation. However, *Seed Cabinet* also serves as a palimpsest that includes other discursive formats and types of local lore often not recognized as traditional categories of taxonomical knowledge. In this essay, we describe *Seed Cabinet* and elaborate upon the metaphors appropriated from natural history. We reflect upon the different levels of collaboration that occurred in both the collecting of information and the presentation of the work. we also discuss how *Seed Cabinet* employs technology and alternative ways of knowing as a strategy to expand the relevance of natural history to seed saving and food security.

Seed Cabinet is an interactive sculpture that uses the "visual traditions and theoretical formulations of historical natural history"[1] to communicate local vegetable varieties and to create a dialog about sustainability and food security. Card catalogs, glass slides, and preserved specimens are obsolete yet very familiar cultural objects which, when activated by and hybridized with performance, video, and electronics, bring together multiple ways of knowing, disrupting and playing with the audience's expectations of library, archive, and machine.

Seed Cabinet is an interactive sculpture that uses the "visual traditions and theoretical formulations of historical natural history" to communicate local vegetable varieties and to create a dialog about sustainability and food security.

In the tradition of the wunderkammer, the drawers of a repurposed "old school" maple card catalog are filled with seed specimens and images of regional heritage fruits and vegetables. When a drawer is opened a photoresistor is exposed to light. The change from darkness to light functions as a switch that activates LED backlights illuminating a resin block impregnated with seeds and a glass slide printed with an image of the card catalog drawer's vegetable. Simultaneously, rare earth magnets in reed switches are attached to the back of the card catalog drawer and the back of the card catalog proper. When the participant pulls open the drawer, the connection between the magnets is severed sending a message to a *Raspberry Pi* microcomputer running a program called *Pi Presents*. The disconnection triggers the playing of videos and audio narratives onto a screen embedded into the top of the card catalog.[2]

Seed Cabinet began when a decommissioned wooden card catalog sitting in Katerie's office sparked a conversation with colleague, Anna Prizzia, about creating a piece of art that could inspire the public to save and share seeds. Anna is the co-founder of *Working Food*, a non-profit organization that works with local government and community organizations to cultivate and sustain a resilient local food community in North Central Florida.[3] We became interested in seeds as the original repositories of information. "Holding all the historical and genetic information of its parents, the seed may lie buried in the soil or stored in someone's home for days, months, or some

Katerie Gladdys

Documentation of people interacting with *Seed Cabinet*, card catalog, glass slides, resin, seeds, custom electronics, video, 2018, Photo Annemarie Poyo Furlong © Katerie Gladdys

times even generations".[4] The salvaged card catalog, like a seed, is a technology and a "marvel of informational compression".[5] Interacting with both seeds and card catalogues is sensual and tactile, an active rather than a passive experience. Activity catalyzes action that perhaps manifests in further engagement with food systems in the form of learning about and planting gardens. Card catalogs are archaic and aesthetic objects that evoke feelings of nostalgia but also may remind us of static and perhaps even oppressive systems that limit access to knowledge. Placing seeds and images of food plants, audio of oral histories and videos of local and anecdotal knowledge into a wooden card catalog originally used for textual information collides the ordered worlds of academia and libraries with the messiness of soil, plants, and gardens, opening up spaces for dialog.

A guiding intention of the project is that *Seed Cabinet* facilitates a larger dialog about seed saving and food security within my community. Decisions about the vegetables highlighted by *Seed Cabinet* and publicity are also done in collaboration. Most important is how *Working Food* shared and gave introductions to their network of local farmers, chefs, scientists and citizens who then became the content experts for the videos. *Seed Cabinet* has traveled to public libraries in Alachua County Florida as part of a series of workshops given by the *Southern Heritage Seed Collective,* a regional seed hub that saves and distributes local seeds. *Southern Heritage Seed Collective* educates people about local vegetables and seed saving. When possible, Anna and Melissa DeSa, co-founders of *Working Food* have also presented *Seed Cabinet* with Katerie at academic conferences in person or virtually. Historically, a wunderkammer such as the *Dresden Kunstkammer* was called a "working collection with a didactic aim. Its contents were seen as a teaching tool to improve the professional skills and stimulate the cultural interests of its public visitors".[6]

Seed Cabinet invites the audience to engage with stories, told orally and through images that describe personal and cultural relationships with the vegetal world in the form of observations by those whose lives are profoundly intertwined with plants and agriculture.

Anna, Melissa, and Katerie view the presentation of the workshop and the piece as analogous to a roadshow that combines education and spectacle perhaps harkening to the lyceum movement of the late 19th century in the United States. Lyceums were public gatherings usually convened in geographically isolated areas with an explicit or imagined connection to a museum in a major city. "Held in front of hundreds of people, scientific lectures involved audience participation, shocking interested volunteers and showing how scientific principles could be applied to everyday life".[7] Kunstkammers of yore also were embedded with mechanical devices activated by the physical act of shaking which animated the animals and specimens so that they, according to Bredekamp "appear to move, as though twitching and squirming".[8] Reflective of the spectacle of the kunstkammer, *Seed Cabinet* employs maker-based technologies such as microcomputers and sensors to cultivate audience engagement. The idea of people listening to information about the science and art of seed saving followed by an encounter with *Seed Cabinet* also recalls the original by-product of cabinets of curiosity—conversation.

The breeding, planting, and sharing of seeds are historical acts recognizing the history stored in the genetic material of the seed itself, the stories of the geographic vectors of plants and vegetables as well as their site-specificity, the conditions of cultivation, and the manner of culinary preparation of fruits and vegetables. "Historically, natural history operates as a field of inquiry and epistemology to gain an understanding of the natural world largely through observations, rather than experiments".[9] Similarly, *Seed Cabinet* invites the audience to engage with stories, told orally and through images that describe personal and cultural relationships with the vegetal world in the form of observations by those whose lives are profoundly intertwined with plants and agriculture. As an example, the cow pea drawer contains video that moves between scenes from an intergenerational shelling of cow peas and footage of insects pollinating cow pea flowers hours before a hurricane with an audio overlay of the common names of the multitude of varieties of cow peas grown before the 20th century read by men speaking in the local dialect of the Southeastern US. Other videos are practical and poetic presenting the winnowing of lettuce seeds from its dried plant chafe or the removal of calyxes from the seed pods of the roselle (hibiscus) in preparation for regional drinks such as agua de jamaica, sauces, and jellies and for drying the pods for seed saving.

Technological developments alter how we see and apprehend the natural world. Scientists' interpretation of imaging technologies, in particular, creates narratives that continually transform our relationship with nature and ourselves. In *Seed Cabinet*, the video monitor functions as a different kind of lens that reverses the notion

Katerie Gladdys

Video still of shelling peas from *Seed Cabinet,* card catalog, glass slides, resin, seeds, custom electronics, video, 2018

Katerie Gladdys

Video still of shelling peas from *Seed Cabinet,* card catalog, glass slides, resin, seeds, custom electronics, video, 2018

When a viewer opens a drawer, Seed Cabinet provides a moment of pause that potentially elicits the personal memories of the audience as a means to connect how human and plant lives are intertwined and how our everyday decisions and preferences have profound effects on the seeds we grow and thus the food we eat.

of using technologies such as microscopes and genetic testing to deconstruct an organism into discrete fragments. The use of the large screen as a means to share the local community's lived experience of these vegetables, their ecology, cultivation, and preparation revisits its earlier modes of natural historical understanding based upon a broader notion of relations of the whole organism and its context. An encounter with *Seed Cabinet* asks the audience to consider "the many forces, histories, times, and spaces which lie beyond description and classification".[10]

Seed Cabinet employs the construct of natural history by organizing research in recognizable formats and materials: wooden drawers, glass slides, resin specimens, audio interviews, and ordering systems, but also seeks to expand what can be understood as data. Plant hardiness and the seeds' future nutrition and edibility are the most basic units of taxonomy that informed the selection of vegetables that comprise each drawer in *Seed Cabinet*. If the seeds can't grow in USDA Plant Hardiness Zones 9A or 9B of North Central Florida, then the seeds cannot be part of *Seed Cabinet*. The vegetables are alphabetized and each drawer contains a photograph of the plant and its seed. Adherence to what constitutes traditional scientific categories of organization concerning the specimens that inhabit each drawer of the card catalog begins to break down after this most basic of linguistic, climatic and geographical sorting. The project acknowledges and seeks to address albeit indirectly, how natural historic categorizations, ala Linnaeus, were a response to a colonial enterprise that took the form of extractive voyages to the Americas, Africa, and Southeast Asia. In the introduction to the "This Wretched Earth" issue of *Third Text*, Ros Gray and Shela Sheikh state:

> Botanical conflicts can here be understood through the epistemological hierarchies underpinning botanical taxonomy, insofar as imperial science sought to render scientific principles as universal and objective, in doing so suppressing the 'Babel' of local naming practices and abstracting plant life from its local ecology; as such erasing what Schiebinger names the 'biogeography' of plants. By and large, imperial science (what we might call a 'monoculture of knowledge') excluded other, 'minor' histories and systems of knowledge ('ecologies of knowledges'), as well as modes of being-in-the-world that are not premised upon the value, profitability, and usefulness of plants that underpins the vampiric logic of capitalism towards nature.[11]

One way that the *Seed Cabinet* project seeks to foster the inclusion of other narratives and systems of knowledge is to work collaboratively with the Southern Heritage Seed Collective, our local seed library. "Seed libraries function as a unique paradox—protecting our stories, foodways, and diversity by housing a living genome data warehouse, while at the same time operating as a living manifestation of impermanence and our ephemeral notions of substance".[12] In the card catalog drawer dedicated to mustard, Jerome Feaster relates the experience of growing, eating and saving seeds of *Feaster Mustard*, a variety

of broadleaf mustard green that is site-specific and unique to North Central Florida, grown by his family for the past 150 years. Similarly, in the drawer labeled peanut, the narrator demonstrates how each member of his family has their own personal technique of stripping peanuts from the plant, which we have juxtaposed with an audio discussion on the craftiness of the protected sandhill cranes that forage for peanuts and often decimate local peanut fields.

Examining the glass vegetable slides and resin-encased seeds and then watching a brief ethnographic video of our community's lived experience of a local vegetable, recalls how audiences encounter the objects of natural history museums. Decontextualizing the vegetables that flourish in subtropical North Florida displaces what is familiar and ubiquitous. When a viewer opens a drawer, *Seed Cabinet* provides a moment of pause that potentially elicits the personal memories of the audience as a means to connect how human and plant lives are intertwined and how our everyday decisions and preferences have profound effects on the seeds we grow and thus the food we eat.

Endnotes

[1] Alissa Walls Mazow, "Plantae, Animalia, Fungi: Transformations of Natural History in Contemporary American Art" (Ph.D. diss., Penn State University, 2009), 3.

[2] Katerie Gladdys, Anna Prizzia, Melissa DeSa, "Seed Cabinet," Journal for the Creative Arts: Unlikely, Issue 04: Art & Herbarium (Summer 2018), https://unlikely.net.au/issue-04/seed-cabinet.

[3] "About Us," Working Food, accessed June 22, 2019, https://workingfood.org/about-us/.

[4] Anna Prizzia, email message to author, June 24, 2019.

[5] Michael Lindgren, "What libraries lost when they threw out the card catalog." review of *The Card Catalog*, by The Library of Congress. *The Washington Post*, July 15, 2017.

[6] Wolfram Koeppe, "Collecting for the Kunstkammer." In *Heilbrunn Timeline of Art History*. (New York: The Metropolitan Museum of Art, 2000), http://www.metmuseum.org/toah/hd/kuns/hd_kuns.htm (October 2002).

[7] Dickinson University, "Showing Off: Scientific Lecturing in the 19th Century." In the online exhibition, *Making the Invisible Visible*, accessed June 30, 2019, http://dh.dickinson.edu/digitalmuseum/exhibit-artifact/making-the-invisible-visible/showing-scientific-lecturing-19th-century.

[8] Alissa Walls Mazow, "Plantae, Animalia, Fungi: Transformations of Natural History in Contemporary American Art" (Ph.D. diss., Penn State University, 2009), 47.

[9] Alissa Walls Mazow, "Plantae, Animalia, Fungi: Transformations of Natural History in Contemporary American Art" (Ph.D. diss., Penn State University, 2009), 60.

[10] Ibid, 40.

[11] Ros Gray and Shela Sheikh, "The Wretched Earth," *Third Text*, 32:2-3, 165.

[12] Anna Prizzia, email message to author, June 24, 2019.

Katerie Gladdys is a transdisciplinarity artist who thinks about place, marginalized landscapes, sustainability, mapping, consumption, and agriculture. She creates installations, sculpture, videos, and relational performances. Her work has been exhibited in the US, UK, Canada, Germany, Spain, and Croatia. She is an associate professor at the University of Florida. Recent partners include Working Food, Field and Fork Campus Food Program, UF School of Forest Resource and Conservation, UF Office of Sustainability and and Alachua County Public libraries. Her work can be found at http://layoftheland.net.

Anna Prizzia oversees the UF/IFAS College of Agricultural and Life Sciences Field and Fork Program at the University of Florida and is Board President of Working Food, a non-profit focused on supporting and sustaining local food efforts in North Central Florida.

The "Idea of Natural History" in the work of Pierre Huyghe

In Theodor Adorno's writing, the term "natural history" has quite a different meaning to its usual scientific usage. Adorno's idea of natural history aims at reconciling, in form and in content, the opposing forces of nature and history with the aim of overcoming the division of natural being and historical being that Adorno considered to be the central problem of critical social theory. Through sprawling installations, the French contemporary artist Pierre Huyghe creates new forms of interaction between natural systems and artificial constructs. In this essay, Huyghe's body of work is submitted to interpretation through Adorno's dialectic of nature and history to establish the relevance of both Huyghe's practice and Adorno's thought to the conditions of the Anthropocene.

text: **Paul Finnegan**
images: **Pierre Huyghe**

Finding new forms of thought, knowledge, and experience that are suited to the conditions of the Anthropocene is the context for this present text. In this search, French contemporary artist Pierre Huyghe's installations and projects will be examined through the lens of Theodor Adorno's writings on the themes of nature and history. Adorno typically brings the terms nature and history intimately together in his writings, and for particular purposes. An early essay synthesises them in its title — *The Idea of Natural History.* The notion of natural history Adorno expresses here will be central to the task of interpreting Huyghe. Huyghe's experimental enquiry into alternative experiences of nature and history suggest Adorno's writing around these themes as a relevant interpretative framework. The effect of the suspension of any simple definitions of such categories within Huyghe's complex and sprawling installations opens the work up to Adorno's writings on the relationship between nature, history, and art.

With the term natural history, Adorno is not referring to its usage or meaning within the context of the natural sciences. By contrast, Adorno's idea of natural history finds its points of reference within the humanities — visual art, literature and philosophy. Its ambitions, however, are greater than any strict division that the human and natural sciences would permit. The aim of Adorno's natural history is to reconcile an understanding of the human as natural being, or existence with an understanding of the human as the subject or protagonist of a historical condition in which freedom and emancipation are at stake. Such a project inevitably entails a critique of the scientific

Pierre Huyghe
Zoodram 5, 2011
Aquarium, live marine organisms, resin shell
after Constantin Brâncusi's Sleeping Muse (1910)
134.6 x 99.1 x 76.2 cm
© Pierre Huyghe
Image courtesy of the artist;
Marian Goodman Gallery, New York;
Esther Schipper, Berlin; Hauser & Wirth, London;
Galerie Chantal Crousel, Paris
Photo credit: Pierre Huyghe

conception of nature or at least the worldview that separates nature as the object of science. The idea of natural history must be understood as eluding conceptualisation. Strict definitions of the terms that compose it are actively avoided, for the aim is not to rely on given definitions to see how they fit together but to consider how the terms are defined in and through each other. This is the dialectical method that Adorno inherits from a philosophical tradition stretching from Hegel to Marx. The advantage of approaching nature and history dialectically is the possibility of transcending these concepts, which seems such a necessary task in the context of the Anthropocene. We see under the geological label of the Anthropocene the unprecedented entanglement of natural systems with the creations of human history. This entanglement calls for new ways of seeing nature and history and to see how definitions of nature and history are related through their opposition. Dialectical thinking is well placed to serve this task if we agree with Thomas H. Ford's that "the Anthropocene is an essentially dialectical concept".[1]

The opposition of nature and history that must be dialectically overcome is, according to Adorno, based on two binaries by which they are primarily distinguished. The first is the opposition of transience and permanence. For Adorno, the concept of nature has been mythified as that which is essentially static, timeless and predestined. History, on the other hand, is transient, contingent and the product of novelty. The second is the binary of unity and division. Nature is the unified and harmonious state of being, and history, as an unresolved project that upsets and unsettles this harmony and unity is characterised by its incompleteness. Adorno seeks to reconcile nature and history by identifying transience as a quality that nature and history share. Upon the second opposition of unity and disharmony, he aims to challenge received ideas by critiquing the concept of nature as unity. Within the dialectic, and according to its logic, this reconciliation is a continuous process rather than a simple outcome.

This text examines the idea of natural history particularly in terms of its given association with the concept of allegory and the image of the ruin, and an attempt to frame Huyghe's practice through these ideas. Adorno takes the concept of allegory from Walter Benjamin, and for both these men, the allegorical mode is the aesthetic, poetic and experiential embodiment of the dialectical method. Allegorical interpretation is proposed as a way of seeing art but also as a way of seeing the real world. It is (and here we must turn more to Benjamin) the means to appreciate the dialectical character of the relationship between nature and history in the experience of art, the products of a culture more broadly, and the creations of nature itself. Huyghe's body of work will, therefore, be evaluated in terms of Benjamin's identification of the reconciliation of nature and history with the allegorical mode. Benjamin's discussion of the allegorical brings in two further concepts that will likewise be explored in relation to Huyghe's work. For Benjamin, the condition of allegorical interpretation is the

melancholic gaze. Allegory and melancholia become components in a particular brand of ruin theory in Benjamin's writing. Images of decay and ruin in Huyghe's work will be subjected to this gaze in which both nature and history become ruins.

In conclusion, a parallel is drawn between Huyghe's stated aim of making art that is indifferent to the human spectator, and Adorno and Benjamin's realisation that the idea of natural history amounts to a degradation of human experience. Decay, ruin and irrevocable transience, Huyghe and Benjamin may well agree, are spectacles that maintain a certain indifference to the human observer. Both Adorno and Benjamin see this as regrettable, but Benjamin embraces it as a necessity in an active project to approach the idea of natural history by erasing the human subject. Huyghe's quite specific engagement with these themes, in which ruined forms are seen in the context of ecological systems thinking, will be considered in terms of what is useful in Benjamin — for forming insights on the work — but also how Huyghe transforms the motif of the ruin and surpasses Benjamin's vision to serve the purpose of Anthropocenic thinking.

The dialectic of nature and history

Adorno identifies the concept of nature with that of fate, destiny, law - nature as a predetermined eternal reality. It is this conceptualisation that Adorno seeks to negate in his 1932 essay *The Idea of Natural History.* Adorno argues that this concept of nature, moreover, is constituted by and through its opposing concept — that of history. Natural being is defined as static and timeless, and historical being as a sequence of novelties, contingencies, and accidents. History stands in opposition to timeless nature "as a movement that gains its true character through what appears in it as new".[2] Consistent with the Hegelian tradition, Adorno views the subject of history (the human being) in emancipatory terms — as the expression and articulation of a liberatory force. Adorno, however, departs from Hegel's philosophy of history in which Geist (spirit or mind), as the agent of history (understood to belong to both the individual and the collective) does not inevitably evolve in the direction of freedom. This is Adorno's pessimism. For both Hegel and Adorno, history is defined as that which promises human liberation through the possibility of the occurrence of the new. This liberation is the liberation of human nature or nature in the human. Finding himself in less optimistic times than Hegel, Adorno diagnoses a regressive tendency imminent to the progress of the spirit, a corruption of the enlightenment ideals of modernity that he names "instrumental" reason. Adorno sees reason ambivalently as both the prerequisite condition of liberation and as the instrument of the domination of nature (both human and non-human).[3] For Adorno, history, therefore, is the possibility for both the liberation and the domination of human nature.

For both Hegel and Adorno history is defined as that which promises human liberation through the possibility of the occurrence of the new. This liberation is the liberation of human nature or nature in the human.

Adorno sees any ultimate opposition between nature and history as false and considers that a unification or reconciliation of the two (which he identifies as the central problem of critical social theory) is a task requiring a dialectical consideration of their opposition. The dialectical movement is the overcoming of the contradictory aspects of opposing concepts through recognising that the former concept contains something of the latter and visa-versa. In this recognition, a synthesis may be found. But for Adorno, and Hegelian philosophy of history more broadly, the operation of the dialectic is much more than just a way of doing philosophy — it is the mechanism behind historical change itself.[4] Likewise, Adorno's dialectic of nature and history should not just be seen as an interpretative framework, but a force behind the emergence of concrete relations between nature and history as history. Adorno warns us that to grasp the idea of natural history will not be a straightforward or easy task, characterised as it is by its dialectical structure. The idea of natural history goes beyond the conceptual categories of both nature and history. It is not a synthesis of opposing concepts through a simple modification of these concepts but rather a transformation of these concepts into a third.

Dialectical nature

> The concept of nature that is to be dissolved ... would come closest to the concept of myth. [...] what as fatefully arranged predetermined being underlies history. [...] The misconception of the static character of mythical elements is what we must free ourselves from if we want to arrive at a concrete representation of natural history.[5]

Dialectical thinking, recognising that the same always contains something of its other, resists "identity thinking",[6] and applied to the natural world resists both the idea of the possibility of a fixed concept of nature as well as a recognition of the flux of nature itself. Adorno's move is not simply to replace one concept of nature with another, but to challenge the concept of nature as fixed at all, either ontologically or epistemologically. The alignment of Adorno's critique of nature and Huyghe's project can be seen on a number of levels – in form and content and perhaps even in implicit references to Adorno's writings. The resistance of identity thinking is recognisable in Huyghe's work as the resistance to classificatory thinking. One of Huyghe's stated aims is to problematise classification systems such as Linnaean taxonomy or even those of ordinary language. Huyghe's animals are not to be encountered as having a fixed identity according to such thinking.[7] The identity of these animals is fluid. The entities populating his installations are to be no more identified with the names or concepts "dog", "fish", "crab", "microbe" than the audience for the work is to be identified as "human". A skinny Iberian Hound features in a number of Huyghe's

Pierre Huyghe
Untilled, 2011–12
Alive entities and inanimate things, made and not made. Dimensions and duration variable

Image courtesy of the artist; Marian Goodman Gallery, New York; Esther Schipper, Berlin. Commissioned and produced by dOCUMENTA (13) with the support of Colección CIAC AC, Mexico; Fondation Louis Vuitton pour la création, Paris; Ishikawa Collection, Okayama, Japan.

installations and environments. The name that the animal answers to is "Human" as if to confirm the instability of such labels.

Adorno's role for art, in Flodin's reading, is as a "second reflection [that] reveals a crack in the cultural construction of nature and through that crack, we may glimpse the possibility of a nature beyond this construction".[8] In a contemporary context, the argument that nature is a cultural construction may be considered (in certain terms) settled. But Huyghe can be seen have transformed the terms of Adorno's critique. Huyghe's projects demonstrate the thought that the Anthropocene marks the transition of the social construction of nature from the discursive to the material realm. Huyghe, therefore, changes the terms by which art can reveal the construction of nature. The holistic impact on the natural order of the planet by forms of human agency transforms physical nature in an equivalent sense to the transformation of the image of nature through the idea of nature.

This shift of critique is reflected also in Catherine Malabou's philosophical use of epigenetics. Epigenesis is the principle that gene expression is modified by the environment of the individual carrier of those genes. Where this mechanism is active the final form of an organism is therefore not fully programmed in advance, but is the result of an interaction between genome and environment. Malabou considers this philosophically and politically significant. Dorothea von Hantelmann puts forward Malabou's theory as a context for Huyghe's use of biological systems. According to von Hantelmann, for Malabou the emerging field of epigenetics reveals that interpretation and symbolisation is not something outside of material life. Within the feedback loop between genome and environment, the mechanism of epigenesis is recognised as a kind of "interpretation". By describing it thus Malabou extends the discursive character of post-modern social theory to the domain of nature itself. Malabou's argument, "places the development of all living beings in an intermediary space between biology and history or culture", creating "a hinge between the symbolic and the biological".[9] It is this hinge she says Huyghe has created in *After A Life Ahead.*

Ruins

We see in Huyghe's body of work the recurrent motif of the ruin. In Huyghe's complex installations images of neglect and abandonment prevail. Architectural spaces are given over to an uncontrolled occupation of the non-human and objects from art history are left to see what other non-human agencies will do with them. The focal point of Huyghe's seminal dOCUMENTA (13) site-specific work *Untilled 2011-12* is a compost heap where culture and history are left to decompose: An oak tree that Joseph Beuys' originally planted for Documenta 7 lies uprooted, weeds find niches in stacks of concrete slabs reminiscent of a Carl Andre sculpture, and a colony of bees make a home from Max Weber's 1930s statue of a reclining female nude. The ruin also appears as a central motif in Benjamin's reflections on the relationship between nature and history in *The Birth of German Tragic Drama.* Adorno draws on Benjamin's text when he states that according to a certain kind of perception "everything existing transforms itself into ruins and fragments". The gaze that transforms everything into a vision of ruin and is essential for "radical natural-historical thought"[10] is necessarily melancholic. Huyghe's scenarios of decay and loss, as both physical and historical realities, may also invite Benjamin's melancholic gaze.

Huyghe typically references human history through the objects of art history: A broken 19th Century neoclassical statue covered in moss, Monet's *Water Lilies seen from below*, a submerged Brancusi *sculpture*. These images recall Benjamin's definition of the ruin as "history merg[ing] into the setting".[11] Huyghe's ruins are the ruins of modernism and colonialism. Their quality of merging is these artefacts' newly found porosity to biotic systems. Their setting is the set of ecological relations that they encounter. Huyghe's interest here seems to be how these cultural artefacts, in states of neglect and decomposition, can enter into and compose new relations. We might understand these relations as sculpture's *biologically* "expanded field" [12] - to misappropriate Rosalind Krauss's phrase.

Benjamin's ruin theory is presaged by Georg Simmel. However, in Simmel's 1911 text *The Ruin* the dialectical tension between nature and history has absented itself. For Simmel "the unique balance - between... inert matter... and informing spirituality breaks the instant a building crumbles"[13]. By contrast, whatever we are seeing in Huyghe's strange states of decay is not nature as a leveller of spirit or signifier of human hubris. In Huyghe's ruins the fight between matter and spirit, nature and history, is not yet settled. It continues in a contested space of multi-species politics. Ecological thinking is present here in denying the opposition between human order and natural order that Simmel intimates.[14] Simmel goes on to claim that ruins express the truth that "all that is human is taken from earth and to earth shall return".[15] This wisdom is exactly what Adorno challenges as the myth of nature as an eternal cycle in *The Idea of Natural History*. Huyghe's desire to eliminate human direction as much as possible[16] frames the work within the art historical discourse of the ruin. However, the emergent assemblages of artefacts and biological agents that take over their own post-natural evolution put aside many inherited values associated with order and disorder.

Benjamin's somewhat bizarre formulation that through the melancholic gaze everything is transformed into a ruin arises from his indebtedness to the theological concept of a fallen nature. Pensky recalls the significance of this idea to Benjamin – "from the theological perspective of fallen nature the baroque regarded material objects... the objects of physical nature... themselves as containing within their very finitude ... the compacted moral-religious history of the world."[17] Importantly, Benjamin sees this mystical notion as having a critical

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agency within the context of modernity. His logic is thus: If nature is fallen, then it is itself the outcome of a historical event. Fallen nature as the assertion of a historical (qua ontologically incomplete) nature opposes the concept of nature as unity. Furthermore, by applying an immanent critique, the meaning of the myth of the fall can be secularised as an account of the social and historical construction of the concept of nature. For Benjamin, and arguably for Huyghe, nature is historicised by virtue that it is not yet complete. It is a mere fragment of the unified nature that existed before the fall. Seeing nature as a ruin, as a fragment, and thus as paradoxically artefact-like renders nature uncanny. The ambiguity of what is natural and what is artificial in Huyghe's work brings on the uncanny perception that nature is itself a ruin.

Natural history as allegory

> In the language of the Baroque, the fall of a tyrant is equivalent to the setting of the sun. This allegorical relationship already encompasses the presentiment of a procedure that could succeed in interpreting concrete history as nature and to make nature dialectical under the aspect of history. The realization of this conception is once more the idea of natural history.[18]

Here, Adorno states the importance of allegory as a means of thinking the idea of natural history. Within this context, Beatrice Hanssen comments - allegory is to be "no longer merely interpreted as a historically specific trope but rather as a form of memory or historical commemoration" and that "as a historico-philosophical category, allegory... testifies to a profoundly altered relationship with nature".[19] In a further equation that again alludes to the mystical tradition Benjamin asserts that allegory is "nature's mourning".[20] Allegory, as a way of seeing, and not bound by its historical context of the Baroque or even Benjamin's era might be identified as a useful tool in the critical perception of the Anthropocene. Seen by Adorno as a means of revealing the suffering of a dominated nature, allegory becomes relevant to the present.

For Benjamin, and arguably for Huyghe, nature is historicised by virtue that it is not yet complete. It is a mere fragment of the unified nature that existed before the fall. Seeing nature as a ruin, as a fragment, and thus as paradoxically artefact-like, renders nature uncanny.

It is proposed here that the biological entities and systems in Huyghe's work can be read as an allegory of history. This is approached through a discussion of the role of teleology in biology and the philosophy of history. It is permitted by an analogy that can be made between history and organic life according to their teleological character. Modern biology dispenses with a future-oriented teleology, describing the evolution of organs without the language of aims and ends. However, within a functional account of organic structures, a weak teleology still lingers. A retrospective teleology (in contrast to a future-oriented one) is implicit in the language of functional biology — organs evolve according to no plan but their function is inevitably conceptualised as a certain kind of purposiveness. Benjamin and Adorno's philosophy of history has a parallel weak or retrospective teleology (in contrast to Hegel's purpose and ends focussed idea of historical progress). They consider historical events to be meaningful only through the benefit of hindsight. Seeing the sense, reason and direction in history can only happen after the fact.[21] Within these views, in both natural history and human history we see that what has happened to get us to the present had to happen to get us here, but also that there was no necessity for history to happen in the way it did. We can see in Huyghe's work the presentation of living systems as essentially contingent but none-the-less highly coherent. Their suggested plasticity of behaviour and form testifies to the open-endedness of natural processes. If we read these animal bodies allegorically as the anatomy of human history Huyghe's living organisms stand for a certain idea of historical events as prospectively contingent but retrospectively necessary.

Nature as unified or divided

> Idealism and classicism share the idea of beauty as a unified and seamless whole, often compared to the self-sufficient organism. While Adorno ... expresses a certain agreement with this view... he never-the-less believes that modern art needs to ... problematize this ability in order to avoid deceiving us into thinking that reconciliation is achieved ... That is why Adorno pushes the idea of fracture, brokenness, or reflection as necessary for art's truth content.[22]

It is as fragments, or rather as forms showing the lines by which they risk fracturing apart, that Huyghe's animals embody the dissonance between nature and history. As direct interventions into the biotic, Huyghe uses artifice to produce a dissonance in our perception of the unity of organisms. The dog mentioned earlier and that appears in more than one exhibition context is subtly visually altered by Huyghe. Its form is "broken up" in Huyghe's words by the application of pink die to one of its legs. His stated aim is to render the animal "separated from herself".[23] Given the emphasis on allegorical interpretation in this present text, such an adjustment testifies (as allegory) to the untruth of harmony in the conditions of modernity, which Adorno considers to be the primary purpose of modern art. Elsewhere Huyghe draws our attention to how discoveries in the life sciences themselves confound our expectations of organic unity and harmony. The solitary fish that occupies the aquarium in *After A Life Ahead* is perfectly divided fore and aft in the same colour scheme as Huyghe's dog, but this time the sharply abstract delineation of its form is part of the marine animal's natural colouring. Furthermore, two peacocks present during the opening days of the same project are examples of genetic mosaicism. Sometimes referred to as "chimeras" the body tissues of these birds are composed of more than one genotype.

Pierre Huyghe
Untitled (Human Mask), 2014
Film, colour, sound
19 mins
© Pierre Huyghe
Image courtesy of the artist;
Anna Lena Films, Paris

Although this division is not visible it is deeper and more essential than anything we may see.

The dislocation of the Iberian Hound's visual form is in striking contrast and contradiction to its organic wholeness. Colour functions as an arbitrary segregation on the level of appearance - a breaking up of doggy unity on the phenomenal level, whilst its organic unity persists. Huyghe's divided entities still thrive and continue to appear to act in a coordinated and singular way. The dislocation between perception and the real within these examples implies a denial of classicism's principle of beauty in art as the organic unity of perception and reality. Such strategies imply divisions within what we tend to consider biological unities but also a schism between mind and nature, subject and object.

Transience in physical systems and the leaking of fiction into reality

> In nature, the allegorical poets saw eternal transience, and here alone did the saturnine vision of these generations recognize history.[24]

Benjamin sees the reconciliation of nature and history only negatively in the moment of their mutual passing away — in the experience of transience. Adorno, developing Benjamin's thought, says "the deepest point where history and nature converge lies precisely in this element of transience".[25] What Benjamin and Adorno refer to with the term transience is not the change or flux of repeated cycles, of the kind Simmel implies, but rather the concept of irreversible and irrevocable change. Cyclical change amounts to an eternal stasis, and the return of

nature to the mythic dimension. Radical transience, however, smashes this myth. According to Adorno transience in both nature and history is that which prevents a return to a previous state, a state before modernity in historical terms, or a more archaic organisation of matter in physical terms. Transience accounts for fleetingness and loss. In his lectures on *History and Freedom* from 1964-65, Adorno offers Hölderlin's poem *The Shelter at Harhdt* as a model for understanding what he means by radical transience — a concept upon which his idea of natural history is so dependent it. The poem tells the story of an exiled medieval king Ulrich who evades his captors by hiding in a natural rock shelter in the forests of Hardht, Germany. Flodin tells us that what is important to Adorno in Hölderlin's telling of this story is that "only because the traces of Ulrich's stay at the natural shelter have long since been covered by vegetation, does nature become eloquent, expressing a transience that points beyond itself".[26] The expression of transience in Hölderlin's poem is, furthermore, one that reflexively expresses the transience of the poem itself. For Adorno, it is the degree to which this or other artworks reflexively "confront [their] own inevitable transience and decay"[27] that art realises itself.

In Huyghe's installations technological elements — often conceived as machines with an input, an output, and a feedback mechanism — have the role of mediating between biological and man-made elements. These cybernetic systems may be seen as the sculptural equivalent of dialectical tensions and forces. In his contribution to Tino Sehgal's 2016 curatorial project at The Palais De Tokyo, the rate of growth of human cells in an incubator links to the air conditioning system of the museum — thus allowing new relationships to emerge between heterogeneous elements. Elsewhere, Huyghe's uses technologies of feedback to deliberately isolate living systems from their context, such as the aquarium works of the *Zoodram* and *Nymphéas Transplant* series'.[28] Aquariums maintain an independent equilibrium by regulating temperature, oxygen and water quality. In these examples, the use of technology achieves a kind of false stasis of natural microcosms. These particular aquatic environments are without place, mobile, itinerant — and in this sense geographically supremely transient. This characteristic is in contrast to the artificially sustained timelessness of the world behind the glass. But even this permanence reveals itself to be illusory when we consider that these works are not fully isolated systems. They are sustained by electricity generated elsewhere and with an inevitable ecological impact. Arresting transience in one place has a cost in another. In this analysis, these works become a critique of the aesthetic value of permanence.

To move from an analysis of transience in physical systems to one that locates it as a literary and art historical motif reflects Huyghe's interest in "the vitality of the image, in the way an idea, an artefact, leaks into a biological or mineral reality".[29] In Huyghe's most recent major work *UUmwelt 2018* the Serpentine Gallery is overrun with Bluebottle flies. The fly's association with transience in art history is not lost on Huyghe. Within the memento mori and vanitas traditions, flies are a reminder of the transience of life. Within the total context of the show, this signifier comes to life accompanied by flickering images generated by a neural network. The images appear and pass away with a fleetingness that the human eye struggles to keep up with. Flies landing on the wall scale LCD panels on which these images appear become pixels or rather dead pixels. The images (if they can be called this) jitter and twitch with fly-like agitation. They have the quality of pareidolic hallucinations. We learn that the images are the result of an AI algorithm translating the data from the electrical activity of the visual cortex of a human subject. The work thereby becomes a window on the interior of human thought. *UUmwelt* embodies the transience of thought but also the possibility that the ephemerality of thought itself can be objectified and archived. Such experiments foretell the possibilities of contemporary technology to objectify, and therefore to potentially instrumentalise, the natural phenomenon of thought itself.

According to Adorno transience in both nature and history is that which prevents a return to a previous state, a state before modernity in historical terms, or a more archaic organisation of matter in physical terms.

Natural history as the erasure of human experience

> Nature and history are concepts and as such refer to a range of human practices of the organisation of otherwise disparate sets of empirical experiences. If dialectically fused into their 'zero-point' of indifference, however, these two concepts generate an idea, which is a modality of concept with no correlate in any given experience. [...] The idea of natural history ... amounts to a degradation of experience as a perspective, or a way of seeing.[30]
>
> The ruin as the concrete image that emerges at the site of nature and history at their moment of maximum dialectical interpenetration is allowed or encouraged to present itself once the subjective intentionality of the magisterial subject, the sovereign observer, is erased so far as possible from the site of ruin.[31]

In these two quotes from Max Pensky, there is an account of Benjamin and Adorno's view or the role of human experience in their shared idea of natural history. In the first, Pensky identifies Adorno's acknowledgement of the problem of experience, and in the second, he describes Benjamin's embrace of it. Pensky then goes on to describe Benjamin's active erasure of the human subject within the rationale of his ruin theory as "a complex and frankly somewhat unhinged experimental methodology". What seemed unhinged when Pensky wrote this in 2004 seems less so after the rise of non-anthropocentrism and anti-correlationism in art and philosophy of the 2010s. What must have seemed implausible before

Pierre Huyghe

Retrospective. Exhibition view, Centre Georges Pompidou, September 2013 – January 2014

Photo by Pierre Huyghe © Pierre Huyghe Image courtesy of the artist; Marian Goodman Gallery, New York; Esther Schipper, Berlin; Hauser & Wirth, London; Galerie Chantal Crousel, Paris Image courtesy of the artist; Anna Lena Films, Paris

the recent critique of Kantian "correlationism"[32] confirms Benjamin's relevance to this current endeavour. Benjamin's reflections on the ruin represent a form of non-anthropocentrism avant la lettre.

The degradation of the subject in Benjamin's allegorical version of the idea of natural history is explained thus: Allegorical signification is the subjective projection of meaning onto a nature that is indifferent to interpretation, accompanied by the recognition of this very indifference. The melancholic gaze is the result of the regrettable dialectical play of meaning and indifference. For Benjamin, human experience and meaning is a necessary sacrifice for seeing nature as history and history as nature. Considering this final characteristic, the question for us becomes – what connection can be made between Benjamin's realisation of the experiential inaccessibility of the idea of natural history and contemporary attempts to encounter the Anthropocene by de-privileging the human perspective? What has been seen as the relevance of Benjamin's de-centring of the

The sleeping head's movements are neither alive nor dead. The recollection of nature, in this case, is an undead perversion of the reconciliation of matter and spirit.

subject in the context of the post-modern critique of authenticity has quite a different relevance in the context of multi-species politics in the Anthropocene.

Huyghe's explicit non-anthropocentrism aims to erase the sovereign (human) subject. And Huyghe, like Benjamin, sees decay as a spectacle that maintains a certain indifference to the human observer. In *After A Life Ahead,* the seats of the former ice rink that is the site of the installation are conspicuously silent and empty. Placed on a thawed slab of the disused rink an immortal line of human HELA cells grow — a "human" form of life lacking an experiential dimension. An aquarium periodically blacks out denying visual access. However, subsequently, to these degradations of human experience, Huyghe proposes alternative models of experience to replace them. A bee colony — a recurring in a number of projects — presents a model of distributed perception and cognition antithetical to Benjamin's sovereign subject. The decentred intelligence of such systems has analogies in contemporary neuroscience's insight into the de-centred operation of consciousness in the brain. Rather than making art that is not to be experienced at all, Huyghe's art is to be encountered by subjectively projecting oneself outside of a particular and historically contingent way of conceiving of sense, mind, and experience.

The natural-historical human condition

While it may be dubious to consider the title of the 2011 piece *Zoodram 5 (Recollection)* as an Adorno quote, to consider the work in this regard may be revealing. Adorno and Horkheimer's invitation to internalise the idea of natural history is summed up in *Dialectic of Enlightenment* as "the recollection of nature in the subject".[33] Into a large aquarium incorporating dramatic lighting Huyghe introduces, among other things, a Giant (tropical) Hermit Crab and a perfect copy of Constantin Brancusi's 1910 sculpture *Sleeping Muse*. The hermit crab following its instinct to improvise protection from any suitable hollow form that it finds, usually the shells of other sea life, makes an unlikely home of Brancusi's head. If we consider this arrangement as an embodiment, expression or even allegory of Adorno's remembrance of nature in the human, what does it tell us about what it would be to internalise the idea of natural history? If we take Huyghe's sculpture as evidence of Adorno's "recollection" we can speculate on the nature of this transformation. It is a transformation that we can only evaluate by being sensitive to its aesthetic qualities. If we see this image as Brancusi's anthropomorphic sculpture recognising itself as nature, the result of this recognition is quite disconcerting. The resemblance of a human head, in any expressive quality, that it still has, removed from its usual conditions of display and given this new life, is distinctly uncanny. The hermit crab carries the serene visage of *Sleeping Muse* rather like a bad puppeteer would orchestrate the movements of a

antennae

puppet, producing awkward and graceless movements. This reanimation of the human image by a non-human agency, if seen as the expression of the non-human in the human, might be read as the surfacing of the unconscious (as nature) behind the psychic construction of the subject. But what may sound desirable theoretically in Huyghe's *Zoodram 5* is diabolical. The sleeping head's movements are neither alive nor dead. The recollection of nature, in this case, is an undead perversion of the reconciliation of matter and spirit.

We see again the motif of an animal presented in anthropomorphic disguise in *Untitled (Human Mask) 2014.* The film shows buildings deserted after the Fukushima Nuclear Plant disaster. The only inhabitant of these abandoned spaces is a Rhesus Macaque wearing a traditional Noe theatre mask. We occasionally catch a glint of the animal's eyes through the mask. This uncanny spectacle reverses the mimetic function of humans assuming animal form that anthropologists have commented so extensively on, and that has been seen as the archaic basis for art and ritual. Within this context, the ritual of wearing animal disguises is typically described as securing a contract between the human and the non-human. As an inversion of this motif, Huyghe's masked monkey inverts the structure of human/animal relations.[34] Huyghe's film in its theme of radioactive pollution and desertion presents a scenario where nature and history are unreconciled.[35] The scenario may also be framed within an art historical convention where the image of a monkey is a substitute for the human, in which terms this work becomes about "the human condition"[36] — a description Guggenheim Bilbao gives to the piece. But Huyghe's image, which could equally argue that to be human is only to be human as a mask, problematises both a straightforward animal symbolism and the implicit essentialism in the term human condition. What remains after the withdrawal of humans from Fukushima, and what is transformed into fiction in the film, is the non-human fated to continue the charade of playing human. Masks conventionally signify fate in many theatrical traditions. Or even, in this abandoned place, the fate of the non-human to always be seen through the human even and paradoxically in the absence of the human gaze. In the confusion between the human and the non-human within Huyghe's film, the Fukushima disaster may be seen as a dissonant natural history. The impact of this radiation accident exists over deep time. Within the deep past, the identity of the human becomes indistinct from that of the primate with which it shares a common evolutionary lineage. Like *Recollection* the scenario of *Untitled (Human Mask)* is a recollection of the non-human in the human. But, the closeness of the animal protagonist to us in behaviour and form, invites a non-anthropocentric reading where within this

Pierre Huyghe
p.101 - *After ALife Ahead,* 2017
Exhibition view, Skulptur Projekte Münster, 10 June – 1 October 2017
© Pierre Huyghe
Photo credit: Ola Rindal, Agnese Spolverini, Marta Vovk, Angela Pye, James Voorhies, Pierre Huyghe Studio
Photo by Pierre Huyghe © Pierre Huyghe
Image courtesy of the artist; Marian Goodman Gallery, New York; Esther Schipper, Berlin; Hauser & Wirth, London; Galerie Chantal Crousel, Paris Image courtesy of the artist; Anna Lena Films, Paris

fiction the monkey ancestor sees its evolutionary future as human, a prophetic dream in a proto-human mind.

Conclusion: Mythic nature in the Anthropocene

The dialectical critique of nature and history reveals the illusory ways in which history is reified as nature and that are complicit with the domination of nature. It also reveals the possibility of the liberation of human and non-human nature within and through this dialectic. In the conclusion to *The Idea of Natural History,* Adorno addresses György Lukács's statement that revolutionary historical consciousness starts from a critique of mythic nature. Myth, Flodin summarises, is complicit in the domination of nature by turning nature into "something merely static and unchangeable; nature perceived as the continuous repetition of the same events", for it follows that "what can be predicted can be manipulated for one's own benefit".[37] Furthermore, Adorno following Lukacs, diagnoses the relationship between history and nature within consumer capitalism as one in which history is petrified as nature. Capitalism assumes the false and illusory status of "second nature". However, Flodin continues, it is Adorno's view that although "our nature dominating society has congealed into second nature … through philosophical interpretation, it can be exposed as something man-made that has come into being historically, and thus possible to transform".[38] Adorno's dialectical critique of nature and history reveals both the illusory ways in which history is reified as nature (and that are complicit in the domination of nature) but also the possibility of the liberation of human and non-human nature within this dialectic. Perhaps through the experience of Huyghe's work, such a historical consciousness might be glimpsed and glimpsed as a consciousness that must include both the human and the non-human as historical agents.

Huyghe's practice transform the thesis of the social construction of nature, by seeing this construction in both discursive and realist terms.

Huyghe's practice transform the thesis of the social construction of nature, by seeing this construction in both discursive and realist terms. In Huyghe's installations, the openness of nature to the production of novelty is facilitated through the setting up of feedback conditions between natural and technological elements. As such, Huyghe proposes alternative histories and futures for nature. We may really construct nature (or rather nature will construct itself) if nature can reinvent itself continuously. But there are remaining aesthetico-political questions about Huyghe's strategy of indifference to the human observer. Is the indifference of nature to human experience in Huyghe's work, it might be asked, an allegory of the indifference of the machinery of capitalism itself? Adorno warns us that consumer capitalism seems timeless and unassailable in the eyes of its subjects by associating itself with the mythic timelessness of nature. The indifference of the living systems in Huyghe's work to human subjectivity, as the indifference of nature to human meaning, may, with a small shift of emphasis, be no better metaphor for the indifference of capitalism. On the other hand, Huyghe's biotic/abiotic/technological compositions (or decompositions), although characterised by their indifference to human subjectivity, and despite this, may promise to be models of a non-instrumentalised, liberated (human) nature in their capacity to resist mythic nature, and to resist the petrification of history as mythic nature.

Pierre Huyghe
p.102-103 - *UUmwelt, 2018*
Exhibition view, Serpentine Gallery, October 2018 – February 2019
Deep image reconstruction, sensors, sound, scent, incubator, flies, sanded wall, dust
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Image courtesy of the artist; Marian Goodman Gallery, New York; Esther Schipper, Berlin; Hauser & Wirth, London; Galerie Chantal Crousel, Paris
Photo credit: Ola Rindal, Agnese Spolverini, Marta Vovk, Angela Pye, James Voorhies, Pierre Huyghe Studio
Photo by Pierre Huyghe © Pierre Huyghe Image courtesy of the artist; Marian Goodman Gallery, New York; Esther Schipper,

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[27] Hanssen, *Walter Benjamin,* 79.

[28] For ideas in animal ethology that have influenced Huyghe's here and elsewhere see, Jakob von Uexküll, *A Foray into the Worlds of Animals and Humans: With a Theory of Meaning* (Minneapolis, University of Minnesota Press, 2010). Such spaces create a concrete equivalent of Jacob von Uexküll's insight that the subjective worlds of animals are irredeemably isolated from each other. The viewer occupies the liminal space between the gallery as one frame and the aquarium as another. The mutual isolation of the aquarium inhabitants and the human viewers makes Uexküll's insight of the absolute non-relation of the experiential worlds of different species into a spectacle.

[29] Sky Godden, 'Pierre Huyghe Explains His Buzzy Documenta 13 Installation and Why His Work is Not Performance Art', *Artinfo Canada,* August 30, 2012, http://www.blouinartinfo.com/news/story/822127/pierre-huyghe-explains-his-buzzy-documenta-13-installationand-why-his-work-is-not-performance-art.

[30] Pensky, "Natural History," 231.

[31] Pensky, *Melancholy Dialectics: Walter Benjamin and the Play of Mourning* (Amherst: University of Massachusetts Press, 2001), 118.

[32] Quentin Meillassoux, *After Finitude: An Essay on The Necessity of Contingency* (New York: Continuum, 2009).

[33] Horkheimer and Adorno quoted in David Michael Kleinberg-Levin, *Before the Voice of Reason: Echoes of Responsibility in Merleau-Ponty's Ecology and Levinas's Ethics,* (Albany: SUNY Press, 2008), 91.

[34] Such an inversion, however, does have echoes in the history of visual culture – see, for example, *Andrea Alciato, A Book of Emblems: The Liber Emblemata In Latin and English* (Jefferson: McFarland, 2004), 219. In this woodcut from Andrea Alciato's 16th Century Book of Emblems depicts a fox, entering a theatre director's store, taking up a theatre mask in her paws and exclaiming in the accompanying epigram 'Oh, what a head is this! - But it has no brain!". What seems distinct in the choice of a fox as the carrier of moral message "mind, not outward form, prevails" (among its many other allegorical associations) is that the fox's elongated snout will not fit the mask.

[35] Radioactive pollution has insidious effects on the equilibrium between the rate of genetic mutations in organisms and the rate that natural selection can reproduce beneficial mutations, without which the natural system breaks down. Its effects span time-scales outside of the human experiential frame.

[36] "Pierre Huyghe: Untitled (Human Mask)," Guggenheim Bilbao, accessed July 1, 2019, https://www.guggenheim-bilbao.eus/en/exhibitions/pierre-huyghe-untitled-human-mask

[37] Flodin, "Adorno on Hölderlin," 7-8.

[38] Adorno "Natural History," 118.

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Shooting the Messenger

In these years, the sea and its behaviours increasingly serve as an urgent and unrelenting reminder of global warming. Snæbjörnsdóttir and Wilson's most recent series of works, Shooting the Messenger takes as its leitmotif, the idea of the unwelcome visitor arriving at the shores of an island. The visitor's appearance in this place, though not entirely voluntary is inauspicious, disquieting. This text examines what it means in the context of crisis, (e.g. mass and exponential extinction, environmental degradation, the Anthropocene), to weigh ideas of hospitality against the proposition of the 'visitor' as an abstract, psychological phenomenon, a threat, a catalyst of change and as an indicator of monumental change already in train.

text and images: **Snæbjörnsdóttir/Wilson**

Monday – *anticipation and resolve*:
Snæbjörnsdóttir and Wilson's most recent series of works *Shooting the Messenger* (2018) takes as its leitmotif, the idea of the unwelcome visitor, arriving at the shores of an island. The visitor's appearance in this place, though opportune, is not entirely voluntary and certainly not comfortable. In Daniel Defoe's *Robinson Crusoe*, Marcus Coates' *Finfolk*, Lars von Trier's *Dogville*, the protagonist's appearance, may be seen as the consequence of changed circumstance and possibly a harbinger of other more extreme events to come. Like them, with global warming, looming belatedly but ever more prominently in the media gestalt and so, in public consciousness, the arrival of polar bears in Iceland signifies a pivotal moment, in its potential to trigger either (temporally) new (or historically repetitive) behaviours in the host, with equally far-reaching consequences.

This essay examines what it means in the context of crisis, (e.g. mass and exponential extinction, environmental degradation, the Anthropocene), to consider the condition of the 'visitor' as both an abstract, psychological phenomenon, a threat, a catalyst of change and as an indicator of monumental change already in train. We rely on art practice as a tool of disruption and mediation and consider that strategies of détournement and passivity can be mobilised as prompts towards new thought and productive re-framings of complex, cross-disciplinary relationships. For this to be accomplished, art (and its texts) arrange things in unexpected ways.

So in the following pages, ideas of migration, global warming, displacement, hospitality, times 'past and future' in the context of oceans, are proposed, implied and weighed together, as a way by which the reader might re-imagine how a commonplace practice of over 500 years might otherwise be made to go.

In these coming years, the sea and its behaviour will increasingly serve as an urgent and unrelenting reminder of global warming – the consequences of which, will soon intensify, affecting all (including human) populations and habitats.[1] Specifically, in the far north, existing records show already devastating impact on human and animal habitats, due to global warming.[2] For instance, with warmer seas, the melting of ice and the rising of sea levels, polar bears' means of access (sea ice) to their main food source (seals) is removed, just as their coastal denning habitat (the bluffs against which denning snow is driven) in the Alaskan arctic, for example, is eroded and lost. [3] Throughout the centuries, polar bear arrivals in Iceland too, have been associated with sea ice, but in recent years, it seems that polar bear visits to the island are related to melting ice and their consequential widening hunt for food.

Every coastline is a membrane which is subject and witness to comings and goings – a tireless continuum of ebbing and flowing upon which newness in arrival is a profound manifestation (but only one) of the flux that governs a world of change. It is a reminder of the constant, unremitting attrition of the stasis upon which we irrationally cling for meaning – as we imagine, those drowning might cling to an upturned boat – and as those learning to swim know, that in an endless ocean, their new-found skill, will only ever buy them time, before they are either rescued or perish.

The swimmer, by both her skill and, her stamina, spans and thus defines another liminality, extended in relation to the shore. This is the zone that exists between a shore and that tract of ocean measured by miles, inflected by local currents, water temperature, the weather and the time of day, which tests her abilities and physical capacity for endurance. In this equation, at any distance beyond that zone, she is as good as lost.

In polar seas, the bear is supremely adept. Polar bears have been recorded as swimming over 300 km. There is a [...] confirmed record of a polar bear having swum 320 km, which is the longest recorded swim for a bear, [...] the duration of the swim is not known. (Halldórsson, Vilhjálmsson 2005)

> "The disappearance of ice in the Arctic must then result in population decline and/or migration. Therefore, polar bears already are migrating [...] becoming "climate refugees"". (Ros, B. 2017)

We should acknowledge that though the bear is adept and at home in water, another refugee's fear of the ocean may be suppressed, for instance by an overarching imperative to escape, to follow a line of flight from the old world they fear still more profoundly and which they must at any cost leave behind.

For those whose world seems stable, the margins of that world are increasingly presented back to us, as fragile. Ideas of stability in an erstwhile, globalised world view, have themselves more recently been framed as environmentally precarious and with a rise in popular nationalism, nowhere are they thought to be more in jeopardy, than at the borders between nations.

This conception is itself, a manifestation of obsolescent thinking – on June 28th, 2019, before attending the annual G20 talks, Vladimir Putin in an interview, told the *Financial Times*: "...The liberal idea has become obsolete. It has come into conflict with the interests of the overwhelming majority of the population"[4] – but as we

Snæbjörnsdóttir/Wilson
Shooting the Messenger ♂, digital microscopic composite image and collage, 2018
© Snæbjörnsdóttir/Wilson

know, the conundrum here is that national borders run counter to the principles, dynamics, and practices of ecology. No island (and no culture) is immune to the incoming and outgoing flows of commerce, either 'legitimate' or otherwise, or to those migrations of species, seeds, micro-organisms, of birds, insects, and all things that can swim. And no nation-state is as secure even, as an island. And now in rising tides, the islands themselves are shrinking. Nothing is truly stable. And if instability is seen as a threat, then we must all now live in fear – or adjust. We are all and have all always been the barbarians at someone's gates.

In the context of this fear, or more accurately as a means by which to give such fear associative shape, migrants have been described collectively in oceanic terms, as waves, as tides – a sea in which reluctant hosts are themselves, apprehensive of drowning. Such is the nature of language, that it can and will be turned, this way and that, to suit the privileged speaker. A metaphor will do the politically unifying work 'necessary' to prompt or urge the rising of an opposition, to stem a tide – to stop the flow – to plug a leak.

In the summer of 2008, two polar bears made respective appearances on the Skaga peninsula, (Skagaströnd) in the north of Iceland, on the 3rd and on the 16th of June. Their arrival, though not at all extraordinary in itself, caused a particularly public reaction and controversy.

In response, for Anchorage Museum, last year, the artists made a two-part work entitled *Shooting the Messenger* in which a cross-section of one of each bear's teeth indicating annual, cementum-layer growth, was set against a roster of climate change events, summits and warnings correspondent with those same years of each bear's life.

Tuesday – *arrival*:
'Skagabjörninn' or "the Skagabear" was born in 1986 in Greenland. From records, we know he stayed with his mother until three years of age when he became independent, fending for himself. It is clear to us now from reading his residual dental material, that this was a difficult year in his life but was followed by 5 years during which he enjoyed slightly easier conditions and good health. At the age of 8, he had reached a nutritional equilibrium, having learnt successfully to hunt and defend himself. At the age of 23, it is unclear what made him swim more than 100km from the pack ice between Greenland and Iceland in late May, but when he died on the 3rd of June 2008, he weighed considerably less than was normal, at 220kg. (A healthy adult male polar bear weighs between 350-550kg). From the post-mortem report, we know that his ears were 11,1cm (11,8cm with hair) and his rear feet measured 46cm. He was 146cm around the shoulder and 124cm around the waist. There was a considerable amount of fat below the skin, mostly on his legs, stomach and around the waist. Both front and back teeth were in good condition although yellow and the canine teeth in the lower jaw were worn from rubbing against those of the upper. Despite old age, he was still fertile. We also know that in his stomach there were residues of bones from mammals, birds, fish, scales, eggshells but mostly, the food consisted of flora such as moss and tall grass plants. It was noted that the grass plants had been chewed into 10-20mm short pieces to make digestion easier. 'Skagabjörninn' was however badly infected with Trichinella nativa, whose larva is known to sur-

vive freezing in the muscle of carnivores for several years. Trichinella was found in the tongue, jaw muscles and the diaphragm. An infestation of trichinella larvae in a muscle tissue such as the heart will severely damage the tissue, often resulting in death.[5]

Wednesday – *taking stock*:
Borders appear to be at their most vivid and clear at the liminal margins between sea and land – that zone that is paradoxically never finite, never fixed – often more or less, moist or damp, soaking or drying – ever between fluctuating conditions of wet and dry.

It's not as though the human species hasn't had enough time to understand these things – to learn liminal lessons, twice-daily scored and erased on the pliant surfaces of shores in every clime and landmass across the planet. We've had the time to become accustomed, but still we choose not to recognise the harbingers and messengers of change, even at their most conspicuous, if instead their arrival can simply be dismissed or their meaning denied. But each is a reminder that what we once did, will simply no longer do.

Change brings uncertainty. To the recalcitrant human, the prospect of profound change seems to prompt even stiffer resistance – or more dangerously, denial. When context changes, the temptation, and choice to suppress a symptom, as an apparent 'aberration', may justifiably be reframed as short-sighted and for some hosts, ultimately, most probably fatal.

We cling to ideas, as though they will save us, long after those ideas are worn – because ideas have lent us power – have bought us time, at the same time blinding us, incrementally to the knowledge that ideas will cost us *everything* – in time. Myopia will cost us life, not just our own, but the lives of those for whom, with the best will in the world, we cannot speak or take account – rivers, habitat, species, ecologies. These are the lives we have grown to think of as less consequential and yet upon which, we've had the time to learn, we should depend, like oxygen – like water.

At a point in history, when the worldwide surface of the ocean, its broad extents, and fingered margins had been explored, then in the latitudinal and longitudinal sense, the appetite for exploration changed. Growing commerce had paid for the most intensive period of exploration from the 15th-20th centuries. Having established all known territories across the ocean and how they could most readily be reached, commerce, ever competitive, then drilled down voraciously and unashamed in exercising its prime motivations to plunder for profit.

To drill down is to pierce a skin – and to draw out what lies beneath, is plunder.

For bears in Greenland and Svalbard, the depleted ice may mean that bears become more common visitors to Iceland – more recently certainly, they have been recorded as having arrived by swimming rather than having drifted on ice floes.[6] How should we behave differently in anticipation of and response to these prescient arrivals – and really, for what purpose and to what ends? A change in response to such events could mean that, like those who live more customarily close to the bear, we are acknowledging our ecological position and human effects and so are prepared not just on this, but other fronts too, to adjust and adapt, as must all species in the face of environmental change. If this is not possible for the human

Snæbjörnsdóttir/Wilson
Pyramiden , 2010

Snæbjörnsdóttir/Wilson

Pyramiden , 2010 © Snæbjörnsdóttir/Wilson

Snæbjörnsdóttir/Wilson

A Hearty Welcome: Found Xmas card, circa 1800s (altered Snæbjörnsdóttir/Wilson 2013)

species, in the case of an animal so iconic and so revered, what chance does it have of noticing and reacting to signs, on a less human scale, both bigger and smaller, of environmental jeopardy?

It is widely regarded that the polar bear might or will become extinct – even by the middle of this century.[7] What will happen in the void created by this and other losses – ecologically and philosophically, when such animals are no more?

What does it mean to be present, to watch a living icon become an icon of extinction or loss? In this the 6th mass extinction, we have more opportunities than ever to ponder this condition of disappearing.

What is it to arrive and be lost – what are the thresholds crossed in that process – the arrival and the passing? What does it mean to pass from one state, of 'being' to another anyway – and for whom? In *Shooting the Messenger,* in the diagram of the bears' own making, mapped out in the cementum growth delineation of its years, these lines accrue and on examination in death, betray both fat and lean, hardship and relative living ease – it's the easiest self-deception to imagine this as a parallel existence to our own, but of course, it is not.

It's difficult to speak of these things without pondering the process whereby each migrant comes to arrive, and the degree to which such movement is driven by circumstance and/or an act of choice. Like so many animals, and as once did all humankind, polar bears migrate, according to seasonally shifting temperatures and environmental conditions.

Thursday – *travel and time*:

In 2010, we visited Svalbard for an artists' residency in Longyearbyen. One day, on one of a number of expeditions we made north by snowmobile from there, we rode 110 km across mountains and frozen fjords, to Pyramiden, the deserted Russian coal mining town, which in 1998 had been evacuated, supposedly, without advance warning. Despite its remote location, since the time of our visit, it has become an increasingly frequented tourist site. On this occasion, there was no such presence. An occupant whom we met shortly before leaving, told us that the preserved 'Soviet' town, once with a population of 1000, was at that time occupied by only five, semi-permanent citizens, whose occupation served to maintain the Russian claim to its real estate foothold in the internationally-held state of Svalbad.No-one came to meet us as we approached, over the frozen Billefjorden sea. In fact, everything was frozen, both white – and in time. At the end of our long and noisy journey, at the top of the inclined town, we cut the engines and stared back in sudden, seeming silence, down past the bust of Lenin, past the cultural centre, the library, the sports complex; the apartment blocks and the refectory building, to the vast horizon beyond, dominated by the glacier of Nordenskiöld. There were, on virtually every ledge at every apartment block window, the nests of one, two or three kittiwakes and theirs were the only calls breaking the other-worldly stillness of Pyramiden.

It seemed we had arrived at a frontier, not only in cultural space but of historical time. We dismounted and stood there gazing – instant aliens, alone in a world, both of and out of this one.

The nesting kittiwakes, intermittently wheeling noisily between the buildings, announced a vibrant, presence all their own. But we were highly conscious too, that another animal may be close by. Already deeply embedded in our imaginations, we expected quite justifiably around every corner and from behind every wall a polar bear might emerge. And so, ridiculously, on this occasion, so far from our base in Longyearbyen, we carried a gun. As if…

Clad in black snowsuits with black-visored helmets we moved through the snow-carpeted wide, open thoroughfare, crossing from side to side and peering through windows and marvelling at the near perfectly preserved architecture. It's said that if these frigid conditions prevail, this town would deteriorate hardly at all in the next 500 years. We entered a building. more like astronauts in that place, than the inquisitive tourists we were.

We caught each other's image – alien, against a backdrop of wood-panelled walls, bedecked with '70s Soviet iconography and bric-a-brac. The silence was intense – that with the suffocating echo of my own breath and the slow shuffle of nylon, with each ponderous step, cast me in my own imagination, as the rapidly ageing Dave Bowman – Arthur C. Clarke's Star Child in *2001: A Space Odyssey*. And we thought of the distance, the vibration of rough and trammelled snow over which we'd skidoo-ed, across mountains and fjords and reflected what a privilege it was to be so isolated, in a place so different; it seemed as though we'd travelled instead, not backwards or forwards, but rather, through time.

Of course, our arrival (and our departure) was of no discernible consequence, to any-body or thing; in the 'Hotel/Café' we bought a cup of tea, photographed some brightly coloured cardboard cut-outs of St Basil's Cathedral and gazed forlornly at the little collection of battered books and at two terrapins, wallowing under a pink lamp, in a shallow, glass bowl.

What we're drawing attention to are the effects of unfamiliarity, how it slows us down, creating sometimes troubling, sometimes liberating dissonance – and potentially, how it prompts new productivity in our experience and behaviours.

Friday – *world-making*:

In *Friday's Other Foot,*[8] Paul Carter neatly coins what Defoe describes in his writing of the Crusoe character:

> Defoe's insight is to understand that the coloniser produces the country he will inhabit out of his own imagining. The coloniser is also a novelist, making the lie of the land an index of his own fears and hopes. Crusoe heeds the lightning only because it mimics the operations of his own mind. Likewise, the environment only signifies insofar as it supplies him with a tabula rasa whereon he can inscribe a hemisphere with himself at its centre. Crusoe holds no dialogue with his surroundings, only with himself. His island is of his own making and is conceived concentrically as the distribution of his own interests.

When our own environment is 'made strange' by the incursions of others we might find ourselves acting to slow the pulse of change it portends. Under examination, these thresholds are constructions and not essentially geographic in nature after all, but formed at the intersection of time, space and the imagination. Each such event is rightfully demanding of attention and disquietingly perhaps, consequential re-adjustment. The binary of familiarity (good, comfortable) and unfamiliarity (bad, uncomfortable) that haunts our agrari-

Snæbjörnsdóttir/Wilson

Pyramiden , 2010 © Snæbjörnsdóttir/Wilson

an and non-nomadic Western-style behaviours informs and triggersthe valve of our complacency and imperative toward stasis.

Wherever the choice of stasis in the face of upheaval is credible in this context, stasis remains desirable also, attuned as we are to algorithmic behaviour. But if this is true, where two entities meet and each makes the other potentially strange, something has to give. Diplomacy and negotiation may be a civilised solution where what is shared between the parties outweighs what is perceived as being alien, but when 'the other' presents as *overwhelmingly* 'other' in nature, in behaviour and custom, that threshold appears too precipitous, too challenging for comfort and we move either to eradicate the threat or simply, move *away from its edge*.

Saturday – *further north*:

Throughout history and across cultures, the iconic status of the polar bear has been a focus for the projection of multiple human desires. In Western culture specifically, first exoticised through sustained colonial exploitation and then more recently through sport-hunting, the polar bear has served the fable of human supremacy over nature.[9] Its current vulnerability through depleted ice and its susceptibility to marine food chain toxins, bears oppositional witness to some contemporary some human ambitions and leaning towards environmental and ecological care. In many indigenous Arctic cultures (Inupiaq, Inuit) where there is both a pragmatic and often

spiritual connection between human and animal life, sustained through a sensitivity to local environmental events and effects, the death of a polar bear is also considered with gravity. Traditionally each kill is considered a gift from the animal itself; hence the departed animal is rewarded in spirit, with protocols and gifts of respect and honour. [10] In the last decade, the inhabitants of Kaktovik, a coastal village in the high Alaskan arctic, have noticed a change in the behaviour of polar bears arriving each autumn in connection with their own whaling. The packs are larger and the physical condition of bears poorer. Mothers with cubs have been seen at unusual times of the year. Whereas in times past, the community would have welcomed the opportunity to kill a polar bear, they now consider and enact alternative responses.[11] We visited Kaktovik in September 2018 and witnessed this adjustment – Allison Akootchook Warden and others there told us that the bears are around the village, in ever-increasing numbers and for longer periods of time each year, while they wait for the sea ice to reform. For reasons of safety, respect, and empathy, the bears are given the bones and remains of whales the hunting captains take at this time. They now deposit the bones out on native land, away from the village – this, of course, has the added benefit of keeping the concentration of animals (sometimes up to 100 at a time) away from human danger.

Saturday – *avoidance of murder*:

Back in Longyearbyen, we visited the Sysselmann, the governor (sheriff) of the region to discuss the status of polar bears there in Svalbard. Here, on the artists' residency, we had a list of people, researchers, locals, a cinematographer, a reporter, etc, with all of whom we wished to connect. David Attenborough was there too, filming *Frozen Planet.* As we travelled around, it seemed to us that in every public place, the museum, the bank, the church, the school, the hospital, the restaurant and now here, in the town hall, there was a taxidermised polar bear – which we dutifully photographed. Why or how they were there is a little perplexing, not least because he told us that in Svalbard, the death of a polar bear will always prompt an enquiry, 'not unlike a murder trial'. The Governor had to be assured through this process, that the perpetrator of the kill was in principle, innocent and that all proper procedures, in respect of warnings and human retreat where possible, had been followed in such an encounter and that the dispatch had been an act of 'last resort' because of clear and present danger to human life. (In 2016 Marco Lambertini, director-general of the World Wildlife Fund International, said the shrinking area of sea ice available to the polar bears was contributing to a higher incidence of polar bear shootings in Spitzbergen.[12]

It happened that on that same day of our meeting, a party of French tourists had been cornered by an inquisitive (or hungry) polar bear out on the coast, considerably west and north of the town. Though by no means typical, the Sysselmann informed us, that on this occasion, a helicopter had been chartered to the site and the tourists (not the bear) had been airlifted out of harm's way – a tacit acknowledgement perhaps that the arrivistes were the problem, not the resident.

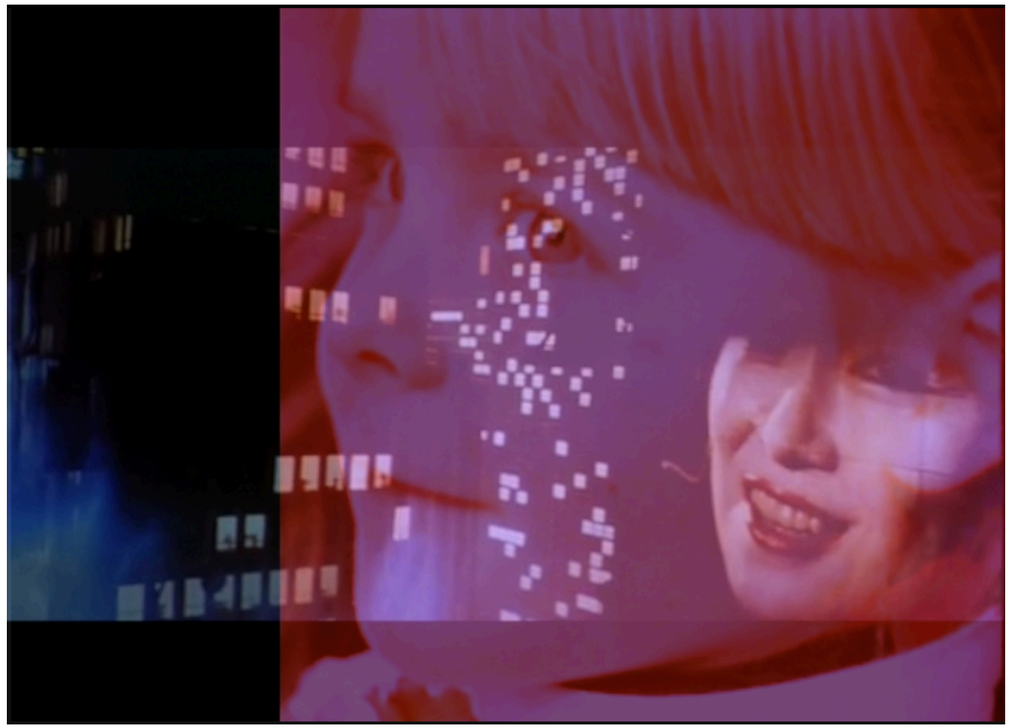
To bite into the fruit and to suck juices from the pulp is to become one with it. Both fruit and consumer are changed.

Snæbjörnsdóttir/Wilson

Longyearbyen Church © Snæbjörnsdóttir/Wilson

Sunday – *space and time (and memory):*
In 2013 the Glasgow-based artist, Jane Topping made a film which is semi-autobiographical in nature. As part of the process, she bit into and oddly, became one with that staple of cinematic science-fiction *Blade Runner* the once cultish classic based on the Philip K Dick novel *Do Androids Dream of Electric Sheep?* One of the most appealing characteristics of *Blade Runner* for the artist was that it is a cultural artefact with an already rich history of having been plundered and reconfigured countless times, not least by the Director, Ridley Scott himself. In Topping's rework she put herself, or rather an early incarnation of herself, at the heart of the narrative:

> *Blade Runner* (1982, Dir. Ridley Scott) is used as the basis or source material of *Peter* (2014[1]) as its use of faulty memory and copied bodies in the film's plot offer shaky and slippery foundations, allowing for new realities to be easily created. A film constructed, in Ridley Scott's words, so that 'every incident, every sound, every colour, every set, prop, or actor had significance within the performance of the film' is so rich with detail that there appeared to be space in *Blade Runner* for the (supposed) uncovering [of] yet another significant [possibly fugitive] detail. I was aware of and enjoying [of] the fact that I was defiling a classic – the epitome of the dystopian post-modern aesthetic on screen – something that I shouldn't really be allowed to touch. But that was the point.



Mark Wilson

Peter, Topping, J. Video composite still, 2014 © Wilson, M, courtesy of Jane Topping

At 10 years old, she'd been filmed at the dentist's, as part of a BBC television documentary, on the uses and effects of hypnosis. Her uncle had videotaped the sequence on beta-Max and at some point, in 1981, by chance, he passed that recording to a friend who was doing some post-production work for Ridley Scott. The footage was intended as a placeholder to be replaced later by Scott's own set pieces. And so, it happened that 2-3 seconds of Jane's upturned face there in the surgery ended up projected, alongside one of the smoking geishas on the side of a towering building in the dystopian metropolis that was the backdrop to *Blade Runner*.

This is where the interlacing of culture and memory, reminds us that ecologies are not only conjured through site, or habitat, but also through time, and that the porosity of our experience and its context, means that each is a continuing accretion of the other.

Snæbjörnsdóttir/Wilson
Shooting the Messenger ♀, digital microscopic composite image and collage, 2018
© Snæbjörnsdóttir/Wilson

> [...] inspired by Scottish socialist writer Naomi Mitchison's *Memoirs of a Spacewoman* (*Mitchison*, 1964), *nou* (a sequel film to *Peter* by Topping 2018) is a tale of space travel, hypnosis, and transformation in which the protagonist, *n*ow moves through time and space, leaving an alien world, travelling via a kaleidoscopic tunnel and appearing to emerge in the tooth of a child who has been hypnotised by a dentist. The video performs the well-known science fiction trope of alien invasion, reframing it from a feminist perspective in order to foreground the fluid nature of identity and problematise a human-centred world view.

Nou, the alien, assumes hybridity with the historical child, the cavity of whose tooth she entered and with whom she has, as a consequence, merged. As the writer of this projection, *Topping* reclaims her representation, taken without her consent, those decades ago.

By imagining, not worlds in parallel, but the worlds of myriad others, sliding across, crashing and enmeshed, we come to see how each complicates the rest and is made continuously more complicated, both by direct and indirect encounters and even perhaps, by near misses, sometimes by random thought and sometimes – in imagination or memory alone.

Monday – *another alien, another arrival:*
Skagabirnan (or the female Skaga bear which arrived on June 16th), was born in 1993 in Greenland and died at Hraun í Skagafjörður, Iceland on 17th of June 2008. She weighed 142kg which is considerably lower than the normal (150-175 kg) weight of a healthy female polar bear. She was fourteen and a half years old, having swum, just as Skagabjörninn (the male polar bear) up to 300km to reach the coast of Iceland. She was 194cm in length where the normal length of a female polar bear of this stock is 200-220cm which makes her rather petite. Around the shoulders, she was 114cm and around the waist 104cm again below the average of her kind. There was no fat underneath the skin nor around the intestines. The veterinary who examined her confirmed that she would have been exhausted. There was water in her lungs and her digestive system. There was a wound from a shot in her right leg and also in her chest. The bullet had exploded inside the chest leaving fragments around her heart. The bullet case was found in one of her lungs. There were large wounds (14cmx10cm) with patches of no hair underneath her forelegs. It was clear that before meeting her fate, she had received whilst travelling, or perhaps just before, a heavy blow to her chest and there were bruises on her knees which might have come when she arrived exhausted at the shore, approximately 24 hours before she died. Her teeth looked healthy and from cementum growth layering analysis, it is evident that she had cubs three times during her life; the first when she was 5 years old, the second when she was 9 years old and the third when she was about 11 years old. She will then, just have finished raising her third litter of cubs at the time she left for Iceland. In her stomach, there were no bones or solids – only water and white mucous. She was likely so exhausted on arrival that she was unable even to eat, leaving untouched, the eider eggs that were all around her on the beach at Hraun.[13]

On the evening of the 16th June, having received the news

in Reykjavík of this second arrival, we called the police officer in charge of the polar bear action at *Hraun*, Stefán Vagn Jónsson, and requested permission to access the site when and where the bear would be captured. He permitted us to be present and promised us the same treatment as the press. It was therefore on the morning of 17th of June (Icelandic National Independence Day) that we drove for four hours from Reykjavík to Skagafjord in the North of Iceland, with cameras, binoculars and a copy of our book *nanoq: flat out and bluesome*.[14] On arrival, along with others, we were kept at a distance of approximately 1.5km, by the rescue unit who used their car as a roadblock. Still, it was possible to identify the animal and to see her quite clearly through binoculars and a telescopic camera lens. This was the first time we had seen a live polar bear in the 'wild'. While we waited, the occasional car arrived to be allowed through the roadblock to the homestead at *Hraun* where a team of specialists was overseeing the proceedings. Amongst them were an expert marksman, the local vet and of course, the couriers of the cage, which at last arrived on the back of a pick-up along with a police escort, lights and siren blaring. During this time, we engaged in conversation with members of the press and some of the men and women in the rescue group. Just before the cage arrived, a helicopter had touched down at the farm with the Danish specialist polar bear anaesthetist.

Shortly after this, after the cage passed through the roadblock, the Minister for the Environment at the time, Þórunn Sveinbjarnardóttir and her team of advisors arrived on the scene. There was much telecommunication conducted amongst the team of men in the wake of the Minister arriving, and it transpired then, that permission had not been granted for the polar bear to be taken to Greenland. The government of Denmark apparently needed assurance that the bear actually came from Greenland (to the west) and not Svalbard, (to the east and administratively, part of Norway). As a member of a discrete polar bear community, she could carry different bacteria and even have significant behavioural patterns, at variance to her counterparts in Greenland. Furthermore, the Danish government wanted to ensure that the polar bear had not picked up a disease during her transit or in the area where she now rested – at *Hraun*. On this, there was much discussion of the fact that this area had experienced the most recent incidence of scrapie in Iceland, and that the polar bear might already have helped herself to a sheep or two. No one, however, had seen the polar bear eat anything at all, other (possibly) than eggs from the eider ducks, for the entire 24 hours it had been under surveillance, and there were strict instructions from the Danish zoologist that she should not be fed by humans. This would make her associate people with food and thus make attacks on humans more likely. Around 4.30 pm we noticed a jeep drive in the direction of the polar bear and park at some distance behind her and to the left of the spot where she had apparently lain since very early morning. Shortly afterwards, another jeep drove more or less straight towards the bear. On seeing the second car approach, she ran briefly into a lagoon and then out again and away, with the two jeeps in pursuit. Before long, she lumbered onto a sand spit between another small lagoon and the sea. This raised panic amongst the rescue team around us. Suddenly there was a lot of shouting and people were being ordered to return to their cars, turn and drive away. Still, the polar bear was a long distance away and we saw that by now, she was walking slowly instead of running.

Then suddenly there was the sound of a shot followed immediately by another and the animal lay on the ground. Utter silence fell amongst all present and we all hoped that she had been tranquillised, the possibility of which was supported by that fact that the third jeep with the cage then drew up nearby the polar bear and at least two other men were standing outside their jeeps.

After a short wait, we received news that having been shot at and wounded, she was shot again, as she was running towards the sea.

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Bryndís Snæbjörnsdóttir and Mark Wilson are a collaborative art partnership. Their 20-year interdisciplinary art practice is research-based, exploring issues of history, culture and environment in the interstices and entanglements between humans and non-human species. Working very often in close consultation in the field with experts including professionals and amateurs alike, they use their work to test cultural constructs and tropes, and human behaviour in respect of ecologies, extinction, conservation and the environment. With a particular focus in the north, their projects and artworks have nevertheless been commissioned, generated and exhibited internationally and as frequent speakers at conferences worldwide, their works have been widely discussed in texts across many disciplinary fields. Their artwork is installation-based using a variety of media including photography, video, text, drawing, objects and sound. They are currently based in Reykjavík, Iceland.
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Alexis Rockman: Natural Histories of the Anthropocene

In Rockman's paintings, we do not see human beings. We see memories and vestiges of them in polluted canals, cascading piles of trash, crumbling monuments and mutated animals. We see their absence, and the altered landscapes they have left behind. We search for signs of hope in the post-human world and find them in Rockman's resilient creatures, who adapt and endure, as natural order returns to traumatized environments. Rockman draws us into this vision of the future with vibrant colors and densely-packed compositions. He commands our attention with crisp details set against loose, gestural washes and hazy horizons. He blends fact and fiction, filling his dream-like landscapes with creatures, landmarks and conflicts, both real and imagined. He invites us to experience this headrush of possibility and urges us to care for our planet before it is too late.

interviewee: **Alexis Rockman**
interviewer: **Giovanni Aloi**

Alexis Rockman is a contemporary American painter known for his fantastical paintings of dystopian natural environments. Born on September 5, 1962 in New York, NY, Rockman tackles ecological issues — such as climate change and species extinction — through his large-scale artworks. Part-artist, part-activist, he confronts pressing social issues head on through carefully rendered paintings of animals and their rapidly changing environments. “I come from a tradition of activism,” he has explained, noting his belief in “the idea that art can make a difference in terms of political change”. A student at the Art Student’s League and the Rhode Island School of Design before earning a BFA at the School of Visual Arts in 1985, Rockman currently lives and works in New York, NY. His mid-career retrospective was on view at the Smithsonian American Art Museum in 2010.

Giovanni Aloi: Hi Alexis, this is Giovanni...

Alexis Rockman: Hi! Where are you?

Giovanni Aloi: I’m in Chicago.

Even though I was ambivalent about the so-called habitats that the animals were in, I still identified with the animals and found them very fascinating and enchanting. It’s always been a primary interest of mine.

Rockman: Oh. The Midwest!

Aloi: Are you in New York right now?

Rockman: Yes. I’m sitting in a park on West 4th Street.

Aloi: Nice. Is it that warm?

Rockman: Yes, it’s 55F.

Aloi: It’s still nice.

Rockman: Very pleasant.

Aloi: It might be one of the temporary little perks of climate change.

Rockman: Yes. Before the apocalypse.

Aloi: I have known your work for a while. But I also had the opportunity to see *The Great Lakes Cycle* exhibition here in Chicago at the Cultural Center and I was impressed by the message, the paintings, what they represent, and how they communicate to audiences beyond the academic remit. I think they speak of something urgent in a clear and yet intriguing but accessible way. That’s what I’ve been trying to accomplish with my practice as an art historian and somebody who writes and edits and curates exhibitions. I think it’s important to reach audiences that might not necessarily be already tuned into the conversation.

Rockman: Sure.

Aloi: I wanted to start from your relationship with nature itself. When did you become interested in the subject and was it always the focus of your artistic practice?

Alexis Rockman
p.119 - *Departure,* 2018, oil on board, 44”x 56”
Courtesy of the artist
© Alexis Rockman

Alexis Rockman
The Conversation, 2001, oil on wood, 72”x 84” Courtesy of the artist © Alexis Rockman

Rockman: I grew up in Manhattan and had limited exposure to actual so-called nature, whatever that means. To me, that could mean going to New Jersey. I went to camp during the summer in Pennsylvania also for several months- an urban American tradition, but nature was very vivid in mind as something to long for and a place of enchantment. I collected reptiles and amphibians and had pets. I drew animals. I loved going to the Natural History Museum, the Bronx zoo. Even though I was ambivalent about the so-called habitats that the animals were in, I still identified with the animals and found them very fascinating and enchanting. It’s always been a primary interest of mine.

Aloi: Were you always interested in nature as a subject for your art or did it become central to your work later on?

Rockman: That’s the only thing I’ve been interested in. But I don’t

know what nature is. Our relationship to and our perception of ourselves in relationship to other plants and animals, ecology. I always found the representation of nature to be mostly fraudulent because it didn't show human's impact on it. It is of a fantasy that I found was not helpful in terms of our understanding, not only what was happening in the world but our relationship to it and our ethical responsibility.

Aloi: That's, of course, something that's been crystallized by Natural History Museums and Natural History Illustration throughout time. This idea of exclusion where humans are not represented in dioramas. What's your relationship with Natural History Museums in your childhood and today?

Rockman: I've always had a very enthusiastic, from my perspective, and a caring and loving relationship with the American Museum of Natural History and the people that dedicate their lives to doing research or representing ecology. However, that does not exclude me from being ~~un~~critical of the individuals, but critical of the institutional ideas about nature that come from them. My mother worked at the Museum of Natural History when I was a kid. I know it very well. I'm friendly with many people that work there. I've collaborated with many people that worked there.

I had a column in *Natural History* magazine for three years in the '90s. Every month, I had a page that I could do whatever I wanted with. The editor of the magazine asked me to go to Manaus, Brazil, to work on a project about forest fragmentation and representing climate change in 1998. I have had a fruitful, enthusiastic, and I hope mutually beneficial relationship to natural history museums. Just last week, I had a great visit with Don Luce, the long term director of the bell museum in Minneapolis, he gave me a tour of the amazing new museum building. They have some of the greatest dioramas in the history of diorama design from Jacques.

I've always had a very enthusiastic, from my perspective, and a caring and loving relationship with the American Museum of Natural History and the people that dedicate their lives to doing research or representing ecology.

Aloi: That makes perfect sense. Do you visit natural history museums regularly when you travel? Is it a destination for you?

Rockman: I always try to visit them. It depends on if I'm traveling with my wife, Dorothy she gets a get a little tired of it sometimes. I think you learn a lot about the culture. if you're in a new country, it's fascinating to see the relationship between humans and nature. It's always interesting.

Aloi: You work in different media. Sometimes your approach is more traditional, as in the case of your oil paintings. I am referring to the treatment of the material, not the representation of the subject. In others, you draw your art materials directly from your subject. What draws you to certain aesthetics or materialities is instead of others?

Rockman: I understand why oil painting is perceived as traditional since it's been around since the 15th century. But if you're making drawings out of the soil, that could be the oldest tradition and the history of representing anything, right? I would say that if you're making drawings out of soil or dirt or rock, is there anything older than that in terms of the tradition of humans making art from cave paintings? That's exactly what they're made from. I try to find ways

Alexis Rockman

The Life Boat Erebus, 2019, oil on wood, 56" x 44" Courtesy of the artist © Alexis Rockman

to be inventive, certainly for myself in as many traditions as I can get my hands on.

Aloi: That's interesting. There's something primordial in using materials like soil, for sure.

Rockman: Is there anything more primordial than soil?

Aloi: Indeed. I remember seeing your drawings with soil at the cultural center and to me, they speak directly of an indexical connection with a place or an ecological reality. They throw a lifeline outside the gallery space to a place and time that's situated elsewhere. Oil paint as a synthesis of many plants, minerals, and animals that have been made to disappear and become a malleable material doesn't necessarily speak of a specific geographical place or ecologi-

Alexis Rockman

Evolution, 1992, oil on wood. 96"x 228" Courtesy of the artist © Alexis Rockman

cal reality. I always found interesting how oil paint seems to disentangle itself from this kind of ethicality quite interesting.

Rockman: Well, the field drawing set is from the field and they are, as you said, a direct lifeline or diaristic artifacts from going to a place and having some sort of intimate relationship with geography. You're correct. However, even though I get my paint from Dick Blick, I'm very aware of the tradition of oil paints and pigments and where cobalt comes from. I'm not a connoisseur of the history of oil paint, but I am aware that they are from different places and cultures.

Aloi: Yes. It's just that oil paint and other processed materials very well blended and synthesize the world to the point of disappearance. Another thing I am interested in is the relation your work has to natural history illustration and nature painting since you employ realism as your optic of choice—something I link to the past of natural history, the past of dioramas as well, but I'm more interested in painting and illustration specifically.

I wanted to hear a little bit more from you about this choice because realism goes in and out of fashion and depending on the historical moment we are in. But it seems to remain such an important cornerstone in the history of the representation even today. Why is realism so important in your work?

Rockman: Well, I would argue that first of all, I'm never particularly concerned with what's going on in terms of artistic fashion. Many interesting artists come and go and whether they're popular at the moment doesn't diminish their achievement. I've always tried to frame myself as someone who doesn't really — I mean, I honestly don't care about that stuff. I pick and choose from a menu of representation and other types of painting according to what I think is appropriate for whatever I'm interested in. For instance, a painting

Alexis Rockman

Pioneers, 2017, oil and acrylic on wood panel, 72" x 144" Courtesy of the artist © Alexis Rockman

I was working on last night is a representation of a type of funnel cloud where there are maritime hallucinations that are going to be are they in the cloud? Are they real? Are they not real?

there are many different ways of representing things. If I want to paint meticulous pollinating insects, and I want to talk about the history of pollinators and specific species, then I better get it right in terms of what they look like. I've got to get as much information into that insect as possible, because that's what I'm interested in for that particular project, however, if I'm interested in an evocative or blurry insect.-could be just a blob of paint. it depends on what the project is about.

Aloi: Since we're talking about realism, one of the areas I've focused on in my research over the past few years involves symbolism and the representation of animals and plants in art. During the renaissance, there was an interest in clearly representing the species of a plant or an animal because of the symbolic meaning attached to it. Recognizing an animal or plant in a painting allowed viewers to unlock a hidden meaning. Of course, that tradition developed into the Dutch Golden Age in which flowers represent individual concepts. I argue that that's a limiting relationship to nature and that it distracts us from nature itself. That a somewhat misguided way of engaging with nature since it asks us to look at ourselves in a mirror. When we look at a painted butterfly in a baroque painting, we are expected to see the human soul. When we look at a tulip, we are asked to see love instead of the insect. I was wondering if you wrestle with symbolism in your work? What role do you assign to symbolism if any?

For instance, when I paint a rat, I'm not painting a rat necessarily as something negative. I see a rat as a profoundly successful organism.

Rockman: Well, I am very aware of and knowledgeable about the history and the iconography of plants and animals. However, my relationship to them might be quite different than, say, a 17th-century Northern European artist. I'll give you an example. I have a painting in a show at the Royal Ontario Museum right now. It's quite a large, five and a half feet painting of a mosquito. About five and a half feet tall inside the mosquito, you can see a cutaway into its abdomen with the various parasites that have traditionally tortured humans throughout history. when the curators asked me to write a text about what I was thinking about when I made it, I realized that the painting meant to me, and mosquitoes can mean many things to many people.

I wrote about the mosquito in a very celebratory way and described it as a beautiful cathedral. The text was an appreciation, not only in terms of evolution but also in terms of keeping humans out of certain habitat that they would destroy if there weren't mosquitoes. They were very alarmed by my text and refused to include it because they felt it might offend certain demographics of their visitorship.

What I'm thinking about is very much based on my relationship to not only art history, but also the history of science, and my feelings about things from a political standpoint. For instance, when I paint a rat, I'm not painting a rat necessarily as something negative. I see a rat as a profoundly successful organism. Also, there's a fascinating tradition of the representation of rats. Rats also are the vector for bubonic plague, or they could also be a metaphor for what is human.

Alexis Rockman
Raft, 2010, oil and resin on wood panel, 50" x 70" Courtesy of the artist © Alexis Rockman

Aloi: Yes. I think that's one of the most important challenges we face in art, especially, when the realistic representation of animals and plants is central to the work. There's an encoded amount of information in us that we absorb from our parents, teachers, and friends as we grow up, whereby we are pre-encoded to think about animals and certain plants in certain ways. Thereafter, it becomes very hard to think out of the box and originally. I think that's part of the ecological challenge that we are going through right now that we need to rethink what's good and what's bad beyond these ideas that we've inherited.

Rockman: You could certainly say that about mosquitoes.

Aloi: The mosquito example is extremely interesting, and I just wanted to dig a little bit deeper. I haven't seen your painting of a mosquito yet. I have noticed that in your works, you present the inside and outside of certain situations as well as animal bodies. Can you tell us a little bit more about that? Why do you feel the need to dissect?

Rockman: First of all, there's no knife involved. [laughs]. There is this curiosity about what's below the surface. There's a sense of

pleasure in being able to see simultaneous views that—I know whenever I go to a body of water or to an area where I think there might be some life under the surface of the earth, I'm curious about what's down there. It's the way of having a miraculous view, a God's eye view, even though it's not theological. There's also a sense of power and pleasure of being able to see what you're so-called not supposed to see in a Hitchcockian sense.

Aloi: Can we say that there is something of natural history illustration in that too?

Rockman: I think it's more generally related to a broader history of visibility in natural history. Not just illustration. It's the tradition of the vivarium, the diorama, the zoo enclosure. That is something that is meant to reveal the behavior or systemic of ecology in a context that humans wouldn't otherwise be able to see.

Aloi: One of the aesthetic solutions in your paintings, which is to show underwater and above water realities at the same time. This aesthetic solution reminds me of natural history dioramas. As you say, it's also part of this tradition, perhaps, of visibility that was heralded by the introduction of fish tanks.

Rockman: Yes, going to the aquarium. I would also argue that it's a way very much like Albertian perspective. Your making sense of the world.

Nature has a sense of psychedelic and hallucinatory. I think that's a superficial resemblance to surrealism, which I'm a big fan of, but surrealism is about cultivating a type of subjectivity that's internal.

Rockman: It just seems like the only solution to a problem that I set forth for myself when I started making my work. It doesn't hurt that I didn't know of anyone else who was doing it.

Aloi: What kind of story do you want to tell with your paintings?

Rockman: I don't get involved in that. Part of the privilege of being an artist is that, and as you said, everyone has their perceptions. I have my ideas about it. I'm happy to speak publicly about what I'm thinking, but whatever people come away with from the experience is really up to them and I've had many different very credible responses.

Aloi: Can you tell how us how *The Great Lakes Cycle* came about?

Rockman: I got an email from the curator Dana Friis-Hansen who I'd worked with many, many times over the last several decades. The first time was in, I believe, 1988 at MIT when he was the director there. He said, "I just got hired to be the director of the Grand Rapids Art Museum, and I thought it would wonderful to collaborate on an ambitious project. Do you have any ideas about what we could do together?" So I suggested that.

Aloi: Why the lakes specifically?

Rockman: First of all, 20% of the world's freshwater and certainly a lot of North America's freshwater and The US's freshwater. It's something that I knew something about, but I'd be really interested to get to know more about it. It's such an important resource. There's going to be wars over water in the coming decades and centuries. I knew it was a relatively young situation, and I thought it would be a great project to sink my teeth into.

Aloi: What did the research process for these paintings entail?

Rockman: *The Great Lakes Cycle* was going to be very public. I told Dana that I needed to have a field trip organized where I would drive around the great lakes for a couple of weeks and interview people that had a relationship to the lake. Scientists, US Fish and Wildlife, archaeologists, anthropologists, fishermen, and they developed an itinerary for me which is great. Before I went on that trip, I read about five or six popular books about the history of the great lakes. Then when I got to the — I was hoping that I would meet some interesting scientists on that trip, and it turned out I certainly did, and they were very helpful.

Aloi: Looking at your work has also made me wonder about the influence of surrealism since your work appears to be simultaneously grounded in reality, and at the same time departing from it. I know it might sound a cliché.

Rockman: Nature has a sense of psychedelic and hallucinatory. I think that's a superficial resemblance to surrealism, which I'm a big fan of, but surrealism is about cultivating a type of subjectivity that's internal. Now, my relationship with what I'm doing, it's very much about trying to understand the world from ideas about insight and trying to find connections and relationships between things from an ecological and natural historical perspective. There's a superficial resemblance to surrealism because things look strange or unfamiliar to people if they don't have that much knowledge about what they're looking at.

Aloi: I am interested in that connection.

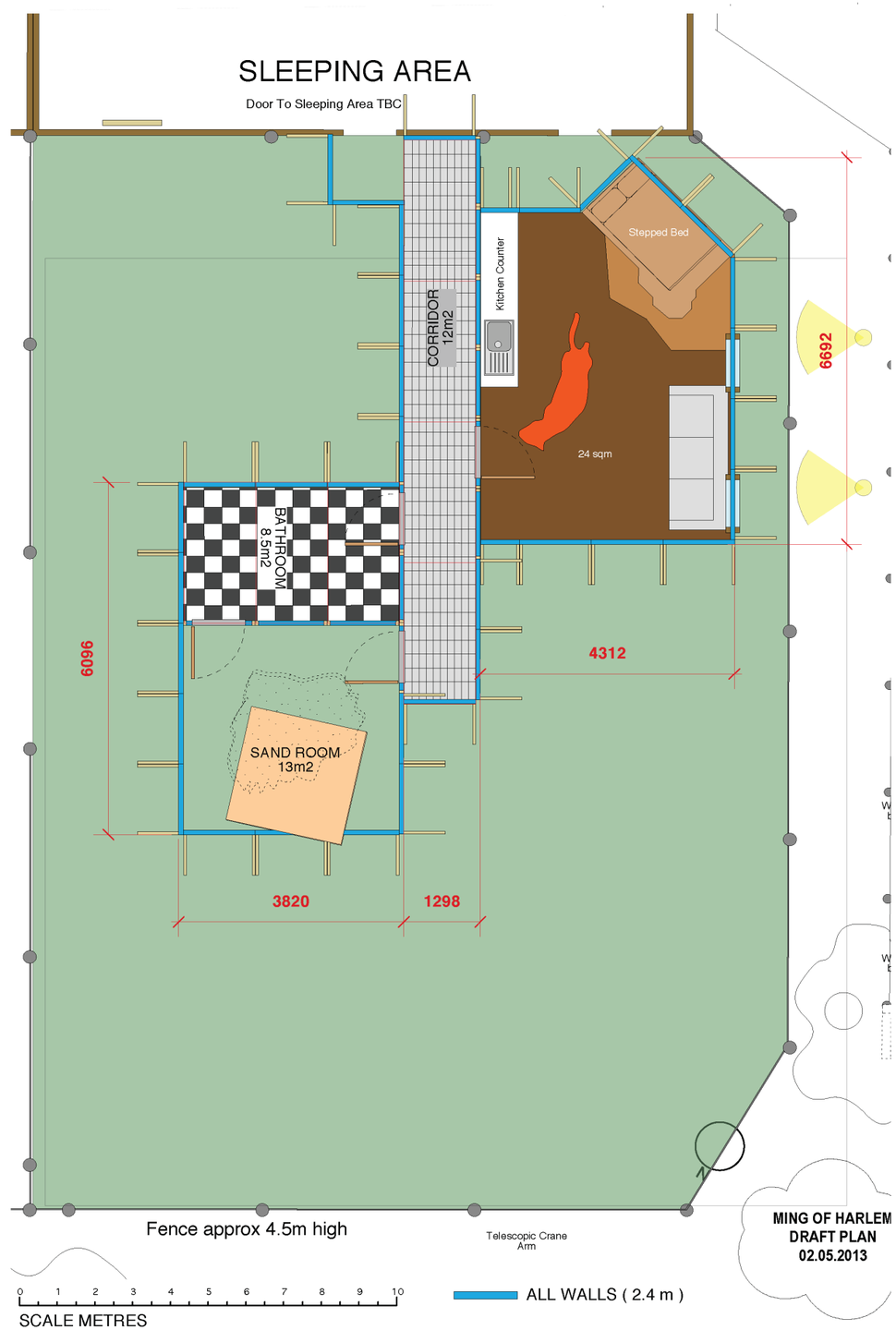
Rockman: I'm a documentarian.

Alexis Rockman is a contemporary American painter known for his fantastical paintings of dystopian natural environments. Born on September 5, 1962 in New York, NY, Rockman tackles ecological issues—such as climate change and species extinction—through his large-scale artworks.

Ming of Harlem

Ming of Harlem, which featured in the Making Nature *exhibition at Wellcome Collection, included the production of photographic documentation, of what was a unique film shoot and performative event, in an apartment - fabricated, established and temporarily inhabited by a tiger in an outdoor UK zoo enclosure. Writing relative to images, memories and testimony from the project, Warnell's text reflects on the film in a number of its modalities, exploring a range of philosophical, interspecies and filmmaking perceptions.*

text: **Phillip Warnell**
images: **Yuki Yamamoto**
poem: **Jean-Luc Nancy**



Lacing a trap for images

"Ming had a habit of taking up the same spot in the late afternoon, where he'd be looking out the window, watching the folks come in and out from the retirement home below. Easy meat."

What are we seeing here? A set built in an outdoor tiger/zoo enclosure for a tiger to temporarily dwell in watched in its construction by said tiger. A kitchen production still, an unseen image from a perspective unachievable (life threatening) if our tiger protagonist were in situ. I'm attracted to the life of images that can't (or shouldn't) be seen. Beyond documents, images of ideas, preparation or transformation, cursory and momentary shifts: off-screen, out of body, in the wings, apparitional, marginal, incorporeal or forensic. Suspended visibility anticipates arrival, tracks position and most of all – produces illusion emptied of lost origin. Such oscillations in the manifestation and erasure of events is how we wait before the forces and conditions of (in)visible things.

How to encourage Rajiv, stand-in actor-tiger, to peruse the view from the window? Try a straw bundle coated in another's urine – a favourite neighbour, *Frosty* the lioness. Combine it with some defrosted horse meat tidbits.

The color scheme of the felid is already present in the image, mapped into the fabric and geometric patterns of 1970's wallpaper. The kill was already made, its spent force folded into a preparation of horse chunks and urine treats. The place is that of an inter-bodily adventure and timeframe. Harlem, October, 2003 melds with the tiger enclosure at the Isle of Wight Zoo, Sandown summer 2013. A palimpsest of a scene is set, this is a film.

Geometry sets, camouflage evokes. Jean-Luc Nancy's poem of pennants suffuses: *Oh, the language animals*: news, maws, muscle, and fur intertwine and exchange. Species meld into the Tigrator's lair (a portmanteau hybrid, not a typo). Raise the scales and stripes, its rectangular skins billow in the wind (or sway about, mounted on the pole of a fashionista).

A daughter, a ghost

The fleeting appearance of a child-like, spectral figure, a daughter. “My mother, a very beautiful woman, had to raise and adopt over sixty children to keep that apartment”. Antoine Yates, our host, sees his fifth-floor apartment as a temporary stopping point, a proposal for an eventual Edenic family unit: predators, mothers, children. The block provides him a ‘crack to escape’, its high-rise verticality producing an ‘ultimate moment’. Holed up living with a tiger and an alligator. Ming rips up the pillow, Al hisses. Predators become poltergeists. The scent of blood and false etiquette of a tiger brought up in social (or other) housing. Ming in Harlem, Rajiv in Manchester. Big cats in captivity – strange distortions of love and private ownership.

Out of body experience meets bodily migration when you enter the space of a tiger’s territory. Numbness and fear. Instinct is bred of certainty, from millennia of trials. Killing creatures, and even more so things, memorize. Objects both hold and *are* memory repositories. We, creatures of forgetfulness, speak and spell it out, then forget. We plunder, we over commit.

Does the little girl become the tiger, or is she – like Yates – due a mauling? Put the cat among the duck down feathers. Her name is like perfume. Will she be found like he, writhing in agony in front of the elevator? “He had my leg in his mouth for about five minutes. I could see millions and millions of years of instinct in his eyes, and my bond just fade from him”. A public secret reigned, except for cascading tiger piss, raining down windows.

The Greek term *krinein* corresponds to a ‘division’, the provocations borne of an extreme situation. The word cracks open, escapes continuity, introduces doubt. It enables essential disruption – further formed in the consultation of humans with other animals. Where do origins commence? How does crime itself begin? Does transgression emerge in the throes of love? If we choose to pursue the meaning of the above, we need to press the interpretation of krinein into ‘perpetration’. The split in oneness, on close reading, opens fissures of self-hood and otherness. It carries a criminal undertone, which accompanies all thought and voices of dissonance. That which is unintelligible is criminal in substance.

Predation wasn't always

Minds and muscles emerged in response to various interactions, formed of inflections in the developing incarnation of the nervous system, either externally, or latterly, internally felt. The space between things was assimilated inside bodies. Organisms were assimilated into other organisms. The Cambrian period gave us animals growing in their importance to the surroundings of others. Responding to this imperative, unambiguous weaponry arrived: claws, fangs, talons, teeth, antennae, serated suckers.

It is suggested that predation began by perpetrators scavenging on the dead, before eventually moving on to hunting down the living. Actions and behaviours demanded knowing, anticipation and minded observation. Tactics and rivalries emerged, culprits and fatalities commonplace. 'There is something of the spider in the fly' as Gilles Deleuze puts it.

Imagine death at the claws of a tiger, a sublime man-eater arriving from nowhere. Perched at the summit of the food chain, death by strangulation of the throat. Orange, irresistible and ready to effortlessly outwit you in the chase. Even a lick of its tongue would take off your skin.

"Whatever your bedtime, turn out all the lights, pitch black. Now imagine your laying next to a 500lb predatory animal. Can you relax, can you rest, knowing he might wake up in the middle of the night, cos he dreaming about a zebra"?

The skin of others

A film cell has a biology, an expanded, cinematic petri dish of a body in every frame. The film set - witness the apartment as a protagonist – is its unwrapped, multi-dimensional form, a nervous system before miniaturisation (and projected re-enlargement). Or are we closer to a canopic vessel, where organs are stored in sacred containers, in preparation for the afterlife of furniture?

Is our sofa still potential prey? Is the long-gone horse now a wounded living-room? Does the tiger sense the cow in its new, geometric configuration? No such couch for Rajiv, whose disinterest in our three-seater was only matched by his obsessive interest in marking doorknobs, entrances, and exits. Are big cats exorcising a form of OCD? *Terror*-torialising, spraying, and licking, delighting in absorbing his own secretions, I am somehow reminded of Howard Hughes' dark behaviours, which in Rajiv's case change on entering the living room, which remains untouched. Is Rajiv remembering his house-proud upbringing, raised as a circus big cat?

Materialisations and ingestion. The genitals always meet the face eventually when being raised, and are an olfactory measure for the growing child, as Georges Bataille reminded us. The nose eventually reaches the armpit. Rajiv's handle spraying culminates in a Flehmens response, the secret receipt of missives within species, or in Rajiv's case, selves of species. A transfer of air containing pheromones and scent is channelled to an organ housed in the upper palette for analysis. Sniff deeply, pull back your head and open your lips wide as you can. The tongue should hang loose, your salivation become excessive. Head moves from side to side, tasting the air. You might look slightly bewildered.

Invisible reading and writing. A detective's search for present absence and sense of recent substance. Scent breaks the silence of the organs, cracking them open. The Flehmen grin is ecstatic, involuntary, an inter-sensory program. It is a metabolic communication, an inner laboratory processing forensic evidence – see *exhibit A*.

Antoine Yates' place (and other such zoos) employ a strange, equivalent system of olfactory enrichment. In spraying perfumes, they engage felids in tracking, searching and display for and of others: this is the pheromonal art gallery of the tiger. Their preferential other? Its Calvin Klein's 'Obsession', by far.

Drink me, or climb in and be drunk by me

In *Ming of Harlem*, we laid on a bathroom mirror of tigerish proportions. Rajiv revelled in *lengthy*, repeat self-recognition (contrary to all convention), vocalising and 'chuffing' - greeting, spraying and circling. Meeting himself admiringly, seen at the door whilst in the corridor, he walks his own dislocation, chance encounters with star, stripe or similar. He vocalises, giving a speech at a film premiere, arriving by red carpet, an enigmatic visibility. Performing both lead role and in attendance at an award ceremony, he lays down amid a captive audience and alarmed neighbourhood.

In this, does he anticipate his own death, which uncannily coincided with the film's premiere? July 4, 2014. A Marseille prison, the strangest of screenings laid on for a film jury of convicts, possibly the most honest film jury I've ever come across. In his enchanted, culminatory scene, does the tiger drink himself out of the film, returning once more to the mind of Yates in the outside world? Bathrooms, photographic darkrooms and caves – originary spaces, of phantasmagoria and light trickery. Jean-Luc Nancy's words, written specifically for *another* premiere of the film, suggest as much:

Oh, the animals
never will it be said too much...oh!
They are so close, so far
so mobile, so immobile
they are so speaky silent, Oh!
more so, they are so cinematic
cinematographic
cinetigeraphic
or cinegatoriffic
claws in the camera obscura
eyes aglow in darkness
Oh, what cinemality!

The wild inside

When Percival Lowell mistakenly observed life on Mars, he made the point that it was vegetable, not animal life, which could be viewed directly from an interplanetary elsewhere. Animals would have to be known by their minds, speculations on their astral bodies. An elephant, he suggested, would be able to jump like a gazelle on Mars. Would we be closer to discoveries of extraterrestrial flora and fauna, if we'd been able to remember how the Antikythera mechanism (with its 37 gears and 233 teeth, set in a clock-like configuration) functioned? Ancient Greece was already able to follow the movements of the moon and sun through the signs of the animal zodiac, predicting eclipses and modelling lunar irregularities. Instead, that technology was lost for over fourteen centuries, the rediscovery of its shipwrecked purpose - at the bottom of the ocean - occurring at the turn of the twentieth.

Facing a crisis of the animal bodies demise, researchers now suggest they would give a lot to hear the voiced, spoken perspective of the creatures they study, even for just a moment. It presents a species-time conundrum.

In making nature, Antoine Yates and countless others reproduce and breed the life-forms, conditions, temperatures, and repetitions of wildness. According to Yates, there is "no real wild". Aquariums, compounds, enclosures, light and heat control of clutches, herds and hive minds. Humanity mimics, breeds or computes the world. We covet the farming and rearing of other species. Yet the lost origin of speech-language, which we now try so desperately to confer onto other animals (oh, to speak with an animal), was learned from them in the first place. Language is always already the side-effect of other species, one which we now try to train them in the art of.

As Michel Serres puts it, "cultures ceaselessly blunt nature and create sciences, which in turn disobey culture, forget, contradict and overthrow it." The tautological suggestion here is that as culture disavows nature, it opens a massive technological acceleration in the time of living things. In creating sciences which then displace it - sidling up once again to the forces of nature – a chronos type cycle emerges that devours all things. It completes the strange contradiction of how blindness, forgetfulness, and complicity permeate up to date thinking, consuming any apparent progress.

DNA, the leaf, the rock and constituents of the corpus remember, humans present.

The crack to escape

Caked in dust and spotted with mould, high rise social housing affords sky-bound allergy and claustrophobia. Its NYC buildings are marked with one ubiquitous motif. The clenched teeth of a window's steel barrier, contracted to prevent accident. A suitable cage for predators?

Ming of Harlem does not re-enact Yate's apartment living quarters, except in the installation of these windows, which are a facsimile. The original lens of social housing is the window. The final thing in place, it is the first noticed, standing for the entirety of the plot, an open threshold to an aerial world.

The film is a re-imagining of the 2430 seventh avenue fifth-floor living space in circumstances that will never be explainable. The documentary genre loves re-enactment and verbatim. It seeks truths, authenticity, and exactitude. Epistemology needs supposed facts and absolutes.

Yates 'crack to escape' encapsulates a truer (to borrow that register), closer relationship to desire and ambition. An elevated bio-utopia reaches escape velocity. The life of Aristophanes' 'cloud cuckoo land', a cloud-like apparition of improbable cities, reminds us of the changes in perspective and status that accompany departures from earthbound thinking.

"See I like to find these little hidden pockets here, cos if you don't find them, how can you find the crack to escape? To see these cracks is divine almost. What else you have here. If you're walking around ground level, then this is what you get, ground-level thing. So if you're up there, you're closer to the stars, you've got no other choice but to look higher, if you look down you can't see things too clear".

Apparatus of smart apparition

A portmanteau placeholder for animality and *cinemality*, it is a globe, a ball, a thing. Reminiscent of a philosophical discussion of the Greek word *gnomon,* whose etymology is in the term *know*, also taking on the geometric form of a sundial's axis.

The *gnomon* signifies the thing that *knows*, and draws our attention less to the one that knows, but to the *object* that knows; one which incorporates certainty beyond the frailties of memory and cognition. Intercepting the sky and earth, the sundial as *gnomon* describes a hinged, shifting relationship between 'known' parameters, a pivotal point set between sunlight and shadow and the process of casting timely shades of *the open*.

The *gnomon* isn't simply a passive thing that has to be read. On the contrary, it has a *nature* that acts upon the world, interpreting and reading it. Consequently, the world reads from it, interpreting its always already active reading. This form of slow knowledge might be considered similar to that of a river's determined progress through the landscape, the action of time as firmly embodied in the rings of a tree, or the instinctual behaviour of an epic, migratory form. Michel Serres suggests the above as a way towards asking the fundamental question - does an intelligence of things exist? And does their dormancy prepare the cultural adventure for us, like a background pre-cognition, a murmuring of things?

I am reminded of the sphinx's status as a hidden, obscure repository (one which questions man). It enacts humanity as questioned by non-human things. The image – most especially the cinematic or photographic image – holds a similarly duplicitous relationship, as it exposes whilst masking origin. In it, a turn, a fold or a veil is revealed, but that of a known unknown and ungraspable source.

It is within this framework (of bodily uncertainty) that David Wills promotes *dorsality* as an originary imbrication of body and technology. The body conceived of *as* a technology, a life-like structure, an organism charged with virtuality in the *turning circle*, one always coming at oneself from behind. This decentred thinking, this movement, is the attraction of the outside. Its bodily reach is housed within an incorporeal set of conditions, those which extend towards the self, extending from pre to post-living, accompanied by a vast repository of knowledge.

The skin of others – Phillip Warnell, 2019

Written under the influence of: Michel Serres, Jean Baudrillard, Jean-Luc Nancy, Peter Godfrey-Smith, Domietta Torlasco, Stephen Barber and others...

Phillip Warnell is an artist-filmmaker and writer from London. He produces cinematic and interdisciplinary works exploring a range of philosophical, poetic and sensorial thematics: ideas on human-animal relations, screen-politics, the presence of those with extraordinary attributes and poetics of bodily and life-world circumstances. He has worked extensively with film-philosophy, with three recent film works made in collaboration with philosopher Jean-Luc Nancy and he has current projects (2019) in production with contributions from author and poet Jean-Christophe Bailly and real-people casting director Martha Wollner. His films are often performative, establishing elements for a film shoot as (part) event, resulting in an interplay between scripted, documented and (sometimes) precarious filming circumstances. He is director of The Visible Institute for research in film and photography at Kingston University, London. www.phillipwarnell.com

Lessons in Things

We constantly attempt to organise and categorise the world around us. Anna Walsh works with natural history imagery and categorization methods. Her work can be understood as a 'folk taxonomy' rather than a scientific process; it is more social and based on local or personal knowledge. Combining traditional skills of observational drawing with digital design to create faux educational charts and maps, Walsh's practice seeks to re-imagine and subvert the ways we see the natural world. Here she introduces her series Lessons In Things and the thinking behind it.

text and images: **Anna Walsh**

My ongoing series *Lessons in Things* appropriates the natural history educational illustration format to convey the themes of anthrozoology (interactions between humans and other animals). In my work, I blend languages of science and art to create intricate maps, diagrams, and charts that invite the viewer to take a closer look and find subtle subversions, often underlined by a humorous tone.

Lessons in Things is a direct translation of the French *Leçons de Choses*, the title of a book of posters by *Deyrolle*, a Parisian institution for natural sciences and pedagogy from the 19th century (now a world-famous taxidermy shop and cabinet of curiosities with an educational vocation). Leçons de Choses was a method of teaching developed by Emile Deyrolle, which consisted of using pedagogical boards to emphasize the ideas and subjects being taught. The subsequent delightful illustrated posters would be familiar to children all over the world as ways of learning about the world around them. The English translation seemed an appropriately vague and arbitrary description for this body of work, and many of my pieces are influenced by the systematic look of these posters.

In *The Farm Animals* (1974) Marcel Broodthaers subverted a classic *Deyrolle* image of cows in a grid and gave them names of car manufacturers instead of cow breeds. This use of subverting the familiar image has informed much of my work, although creating the original image itself is an important part of my observational practice, and I hand draw all the illustrations myself.

I have worked in libraries for some years to support my practice, and the obsessive ordering and categorising has gradually unconsciously infiltrated my work, albeit in a very ambiguous and arbitrary way. I have appropriated the systems, but still question their rigorous systematic use and how they can be interpreted.

Anna Walsh

Big Cats of Britain, archival digital print, 2018

THE STRIPE SET

1. Okapi 2. Lemur 3. Zebra 4. Tiger 5. Somali wild ass 6. Genet 7. Striped hyena 8. Numbat 9. Thylacine 10. Baby tapir

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THE PINK SET

1. Elephant hawk-moth 2. Pine grosbeak 3. Crimson marsh glider 4. Galah 5. Flamingo 6. Major Mitchell's Cockatoo 7. Rosy maple moth 8.Pink robin 9. Himalayan white-browed rosefinch 10. Scarlet ibis 11. Roseate spoonbill 12. Pink katydid 13. Orchid mantis 14. Pink grasshopper

In his essay *The Analytical Language of John Wilkins*, Jorge Luis Borges challenges the theories of categorising by Wilkins (a clergyman and scientist from the 17th century who tried to make up his own universal language by trying to classify the world). Borges suggests that we do not know what thing the universe is, and that to categorise it will only ever result in arbitrary classifications, full of conjectures. He does, however, admit "The impossibility of penetrating the divine scheme of the universe cannot dissuade us from outlining human schemes, even though we are aware that they are provisional".[1]

He describes the *Celestial Emporium of Benevolent Knowledge*, a fictitious taxonomy of animals supposedly taken from an ancient Chinese encyclopaedia, to illustrate his point. The list divides all animals into categories, which include bizarre classifications such as: " a) those that belong to the emperor, b) embalmed ones, ...f) fabulous ones, g) stray dogs, ..i) those that tremble as if they were mad...n) those that resemble flies from a distance".[2]

Categorising the world from the perspective of an artist, rather than a scientist or librarian, means to choose more personal connections. Reading Borges's tongue in cheek list, seemingly a parody of Aristotle's original systematic attempts to classify animals, re-enforced the idea that my categories did not need to be scientific, or even make any sense. When he was curating *The Tomb of an Unknown Craftsman* at the British Museum, Grayson Perry noticed that his approach differed substantially from that of a curator. He admitted to have selected things that seemed quite random, or not the most historically significant, but to have focused on those that resonated with his artistic practice. "One thing that connects all my choices is my delight in them".[3]

Lessons in Things is a personal library of observations and memories; things that have resonated with me over my lifetime, capturing my imagination or curiosity, to be filed away to latent memory, re-surfacing when triggered.

Big Cats of Britain maps some of the sightings of mystery big cats been claimed over the years. What made these sightings interesting to me is how the stories often got blown out of proportion to make them seem more exciting than they probably were. Our removal and isolation from nature and animals has left a hole in our beings, so we become very excited by unexpected encounters with animals we usually associate with wild places. It reminds us, if only briefly, that there is still a wild world out there, although it is rapidly shrinking, and we desperately cling to these experiences to confirm our desires.

The Stripe Set and *The Pink Set* started out as a commentary on the fashion world and its frivolous cycles according to which garments are in fashion one minute, discarded the next. Animal print is not a seasonal pattern, but an important part of nature and survival for many animals, and biodiversity vital to sustain the planet, as we know it. They allude to natural history educational illustrations, although

Anna Walsh

Previous spread:

p.144 - The Stripe Set, screen print, 2018

p.145 - *The Pink Set,* screen print, 2019

p.147 - *Dogs of London*, screen print, 2017

AW 5/5

SEA MONSTER SOUP

commonly called THAMES WATER and some of the creatures you might find in it.
1. Harbour seal, 2. Grey seal, 3. Dolphin, 4. Harbour porpoise, 5. Northern bottlenose whale

the categories and layout attempt to break away from their systematic form.

Dogs of London is a playful take on social stereotypes and local observations, questioning the selective breeding of dogs to create a myriad of shapes and behaviours, reflecting our own characters.

Unicorn? Odell Shepard describes the unicorn as being interesting "almost entirely as a denizen of "The Monarch Thought's dominion"' (i.e. a creation of man's imagination).[4] The mythical story of the unicorn has been entwined with those of real animals, most just as strange and fascinating themselves, and reveal just as much about us and our engagement with the natural word, as they do about the unicorn itself.

Sea Monster Soup. In 1957 the Thames was so polluted it was declared biologically dead, but sightings of various marine mammals and other species in recent years confirm that the river is springing back to life. The title references the 1850 engraving *Monster Soup commonly called Thames Water* by William Heath, a satire of a microscopic examination of the water supplied to the inhabitants of London portraying the 'monsters' found in a drop of water from the Thames.

Anna Walsh

Previous spread:

p.148 - Unicorn?, screen print and watercolour, 2009

p.149 - *Sea Monster Soup,* screen print, 2016

References

[1] Borges, J.L. *Other inquisitions, 1937-1952*, Austin, University of Texas Press, 1975, p104.

[2] Ibid., p103.

[3] Perry, G. *The Tomb of the Unknown Craftsman*, London, British Museum Press, 2011, p11.

[4] Shepard, O. *The Lore of the Unicorn*, London, Random House, 1996, p21.

Anna Walsh is a British artist and designer working in London. She studied Art & Aesthetics at University of Wales Institute, Cardiff (UWIC), and MA Book Arts at Camberwell College (UAL), graduating 2001. She has work in collections such as The Tate Gallery Special Collection (artist books) and various private collections. Her work has been published in *Visual Families* (Gestalten 2014) and *Ecological Citizen* journal (2018), and featured on The Londonist (2011). She is a founding member of Garudio Studiage, an art collective who combine design, art and fashion with a pronounced sense of humor and irony, for whom she designs and makes products for sale, which are sold in places such as The Museum of London, The British Library, Selfridges and The South London Gallery. She also works alongside other members on collaborative exhibitions and projects for clients such as the V & A, Paul Smith and Peckham Platform.

Sheep Pig Goat

Sheep Pig Goat *was a week-long creative research studio devised and run by arts company Fevered Sleep which was commissioned by Wellcome Collection as part of their 2016/17 exhibition Making Nature. It aimed to explore how humans see animals for what they really are – not for what we think they are – through a series of improvised encounters between human performers and animal spectators, witnessed by a human audience. It asked how non-human animals might take their place as active participants and co-respondents within the studio, with agency, desire, inquisitiveness, emotion, intelligence and their own uniquely powerful non-human qualities of attention.*

interviewees: **Sam Butler and David Harradine**
interviewer: **Honor Beddard**

The research studio was set in a large warehouse in Peckham, London, from the 14th to the 19th of March 2017. The research studio was open to the public and over the course of the week, it ran 21 free sessions. At each session, a small audience was invited into the temporarily constructed study area within the warehouse for an introductory talk about the aims of the research studio by Fevered Sleep directors, Sam Butler and David Harradine. The study area featured just some of the many articles, images and publications about sheep, pigs and goats, gathered together as part of their research and development for the project. The walls were covered in a set of provocations in the form of individual words that covered the wide range of assumptions we draw about these animals. Attendees were then led quietly to a seating area separate from the performance space and the animals' private quarters. The 3 sheep, 2 pigs, and 4 goats were invited into the performance space in varying combinations. Like the animals' private spaces, to which they were free to return at any point, the performance space had water and food. Across the course of the week, different performers would spend time in the performance space with the animals. These included 2 dancers, a singer, and 3 musicians. The human performers were directed by Sam and David to improvise. After witnessing these encounters, attendees were invited back to the study area to discuss what they had seen, how they felt, and to give feedback.

Honor Beddard: Before *Sheep Pig Goat,* you had already worked with animals in your practice. Can you tell us about how this came about and where this interest came from?

David Harradine: We began to work with different animals in different projects for different reasons. There was a horse in the performance *An Infinite Line: Brighton,* which at that time, represented a way to foreground the indifference of the non-human into the space. Looking back, I think this was quite problematic. It kind of turned an animal into something else. And to turn an animal into a metaphor for the indifference of nature is exactly what *Sheep Pig Goat* was pushing against. There was a dog in the performance *Above Me The Wide Blue Sky*, who was really there as a silent compan-

Fevered Sleep

Sheep Pig Goat,
performance, 2017, photo courtesy of Wellcome Collection
© Fevered Sleep

ion to the performer. Its main role was to work as a reminder that some people live their lives in very close companionable contact with other species. A dog was also featured in the short film *Still Life With Dog*, who appeared briefly as one of the transient, mortal things that might briefly be part of a human life.

Our project *Dusk* was an invitation for young children to think about their relationships with place, landscape, and with non-human lives. As part of it, we also made a film in which all sorts of animals - beetle, snail, worm, dog, fox, badger, owl - somehow accompanied the central character (part human, part animal) through a period of change. There's something in all this about our recognition that the world is simply full of living things that are not human, and that very often go unseen.

Beddard: Can you describe the intentions behind *Sheep Pig Goat?*

It all boiled down to our fundamental principle of the project of wanting our performers and our visitors to be able to see the animals for what they really are.

Harradine: To try to get people to see. To try to get people to really see. To try to get people to reflect on what they know, and think they know, and presume about non-human animals. To see if it's possible to see non-human animals, and to try to work out what "seeing them" actually consists of. To create a space in which conversation and debate could happen, and to try to develop ways to encourage and facilitate that. To see what would happen - creatively and in terms of what we know about non-humans - if we asked performers to respond to how they thought they were being seen by those sheep and pigs and goats.

Beddard: Why did you choose to work with sheep, pigs, and goats in particular?

Sam Butler: Many considerations and much research went into our final choices of *sheep, pigs, and goats*. It all boiled down to our fundamental principle of the project of wanting our performers and our visitors to be able to see the animals for what they really are. Whilst initially being really excited by the idea and image of, say, a wolf in a space with a human, or a badger, or a bird of prey with their extraordinary presence, size and 'otherness' we quickly had to acknowledge the huge amount of cultural associations with many of these animals which would only serve to derail this idea. Similarly, with pets, we think we already 'know' or we think we understand so much about a dog or a cat and it isn't possible to divorce ourselves from strong feelings around care, or companionship or simple love for these beings.

We are very interested in thinking about other types of animals we strong relationships with for other reasons: the animals we eat. We felt it was most interesting to present these usually shorn, plucked, skinned, packaged, portioned animals as they are so rarely seen in industrialised societies and to present them as whole living, seeing, breathing, reacting beings.

Beddard: Do you think there is something about the medium of performance that particularly lends itself to exploring the relationship between human and non-human animals?

Fevered Sleep

Sheep Pig Goat, performance, 2017, photo courtesy of Wellcome Collection © Fevered Sleep

Not knowing what we were looking for, of what might happen, how the animals would respond, how the other humans would behave, etc.

Butler: I think we have a lot to learn about this relationship, given that there still exist so many examples in which human animals bring other animals to perform for our entertainment. But until we overcome this element of human culture, we will never be able to unpack what we believe we already know from what is actually true. For us, it's less to do with the medium of performance than with putting a particular type of performer alongside another animal. Though we can't deny the inequality which exists in this relationship, perhaps the level of respect afforded to the brilliant improvisation of a contemporary dancer forces us to switch our senses to a higher setting because we want to see, feel, experience these things in the same way the dancer does. Though it's far from perfect, I don't think this live, sensory, charged exploration of animal/animal relationship can be matched.

Harradine: And there's something in performance that inherently relies on an association of bodies in the same space at the same time as other bodies, and there's no reason why all those bodies have to be human. Performers' bodies are tools for knowing, which is different from intellectual knowing or emotional knowing. We knew that we'd need all the different kinds of knowings we could identify if we were to try to really "see" and "know" the animals in that space.

Fevered Sleep

Sheep Pig Goat, performance, 2017, photo courtesy of Wellcome Collection © Fevered Sleep

So maybe it wasn't so much about *the medium of performance* but about working with performers — with all their finely tuned skills of expression and communication, with their highly honed abilities to be attention, to look, to listen, to feel, to respond; with their articulate bodies that can communicate in so many ways.

Beddard: Did you have particular selection criteria for the performers that you chose to work with?

Butler: Yes! In fact, some of the performers we work with regularly and know very well and some we had to seek out. In the first place, as the project was a 'research studio,' we were really clear that we and the performers had to be comfortable with the starting point of not knowing. Not knowing what we were looking for, of what might happen, how the animals would respond, how the other humans would behave, etc. It's a big list of not knowing. We are used to working with the discomfort of the unknown, but we needed the other human collaborators to be open to both possibility and nothingness. Many performers are used to improvising and this skill is honed by listening, paying attention and openness. When we auditioned people by asking them to improvise for, and in the presence of, one of our dogs we were looking for a quality of sensitivity and empathy to the animal's reactions at that time, in that space.

Fevered Sleep

Sheep Pig Goat, performance, 2017, photo courtesy of Wellcome Collection © Fevered Sleep

Fevered Sleep

Sheep Pig Goat, performance, 2017, photo courtesy of Wellcome Collection © Fevered Sleep

As well as this, we were essentially asking them to pay no heed to their desire as highly skilled performers to, for instance, make the best, most beautiful sound or move gracefully, or whatever usually motivates us when faced with a human audience.

Harradine: We had worked with Kip and Petra before. They both struck us as people with an extraordinarily developed sensitivity; they both have high levels of empathy; they both want to work in and with nature and the non-human; they're both brilliant improvisers. We'd also worked with David Leahy a lot before; I think we chose David because he's also a brilliant improviser, and also because he's quite resilient; we thought it would be good to have someone in the space who would just push on if things got difficult. We hadn't worked with Fra, or Tom, or Sterre before. We worked with them because we wanted a good mix of different people. We auditioned each of them with Harpa, a dog. Not because we wanted to know whether a dog (specifically, a whippet) preferred the flute or the clarinet. But because we wanted to see how people reacted when we said to them, could you play or sing or improvise for this dog? We needed people who were open and uncynical, who were prepared to put themselves in a situation where the outcomes of what we were asking them to do were totally unstated, unknown, and unclear. Incidentally, we particularly wanted to work with Tom because when our producer Alison first contacted him, he refused to take part in the project because he's an ethical vegan. His personal/political perspective from inside the project was essential as the work developed. He had a very strong sense of what was ethically OK or not for him, which became a bit of a lodestone for us as the work progressed.

But because we wanted to see how people reacted when we said to them, could you play or sing or improvise for this dog?

Beddard: What reactions did your audiences have?

Butler: I think it's safe to say that the human audience experienced a wide range of emotions. What does an audience, and as opposed to a singular person in this context, feel and experience? Did they consider themselves as audience, or visitor, or onlooker, or witness? Did they come to be entertained? Or to be critical? Passive observers or research fellows? I observed delight, fear, sorrow, confusion, boredom, anger, respect, and all these feelings were apparent in the conversations we had with them after each session.

Beddard: What did you learn about other animals, or specifically about sheep, pigs, and goats, from this project?

Harradine: That there is still so much to learn. That there is such a limit to what we can actually know. That there is an abyss of not-knowing. We thought we would learn so much. We learned how little we know and how we didn't even know which questions to ask. This made us sad.

Beddard: Many of those who attended the research studio asked how you think you might take the research further.

Butler: We are clear that this first research studio merely scratched the surface of our understanding. At this stage, we feel like what we learned is that we know even less than we started with because the research opened up many more unfathomable questions than we had at the beginning. What we are most interested in is how our learning through the project can be of benefit to animals; how a better understanding of non-human animals can inform the work of those who work with them, like vets for example. We are a long way off sharing our learning, but it does feel like the inviting of participants into the exploration is valuable. So we are looking at other contexts for a research studio and we will start to build on the ways we found of being in the space with the sheep and pigs and goats.

Our first priority was to weigh up the welfare of the animals with the practicalities of making a London based project which was accessible for a diverse range of human participants. Not an easy task!

Beddard: As a company, you have a very collaborative practice and for this project you worked with academics, veterinary scientists, farmers, and other experts on animal cognition, perception and animal-human relationships. Were those you approached open to your project and do you think this cross-disciplinary way of working has impacted on their research or field of work?

Harradine: It's useful to talk about Alan McElligott. He was very sceptical at the start of the project. I initially emailed him an outline and a request for us to meet to talk about his research. He responded to say he wanted to talk so he could ask some questions before he answered. During that phone call, he was very clear that he thought the project wouldn't work, and he was suspicious of our intentions. However, once he realised that we were motivated by something ethical, and by a very animal-focused set of questions, he came fully on board and has been incredibly generous and supportive. It's worth noting that this was the first project where some of the academic or science collaborators we approached were sceptical, which reflects the complicated status of different kinds of knowledge (empirical science vs. subjective vs. creative vs. instinctive vs. embodied vs. felt…), different ethical stances, and different personal, political perspectives on what is right and wrong when it comes to encounters between human and non-human animals.

Beddard: The project was a very intense period for you both. You introduced each of the 21 encounters, directed the improvised performances and led the discussion sessions afterwards with the audience. What impact did this experience have on you personally and professionally?

Harradine: It was wildly intense because we really cared. As much as it was a "research studio" it was also a space in which real, and really complicated relationships blossomed and dispersed on a daily basis: between us and those particular sheep and pigs and goats; between us and the performers, whose hearts were very wide open and vulnerable in that space; between us and the visitors; between us and angry visitor, upset visitors, quizzical visitors, interrogative visitors, bemused visitors, sceptical visitors, grateful visitors; between us and Kevin and Cindy (the animals' handlers). Constantly shifting from our practical selves, to our host selves, to our artist selves, to our intellectual selves and back and between.

Fevered Sleep
Sheep Pig Goat, performance, 2017, photo courtesy of Wellcome Collection © Fevered Sleep

And always, all the way through, and very intense by the end, this sense that the more time we spent in the presence of those animals, the more we tried to get to know them, the more we tried to see them, the more distant they seemed to become. And then suddenly, they were gone.

Beddard: Can you tell us a little bit about the setting of the research studio and why you chose that particular location?

Butler: Our first priority was to weigh up the welfare of the animals with the practicalities of making a London based project which was accessible for a diverse range of human participants. Not an easy task! Having spent time with the animals in their 'home' location, we knew the animals spent a large part of their lives in a barn when they were not out in the open — concrete floor, metal walls with separate areas for sleeping, lots of light, a source of water, etc, a warehouse can be very similar to a barn, with the added benefit of having plenty of space for them to exercise. We searched for a space that could accommodate these needs. And at the same time, we knew we wanted to section off an area which could be set up to display our research materials, for our conversations with visitors and with some distance from the animals' quarters for them not to be disturbed constantly.

Beddard: You worked with animal wranglers Kevin Smith and Cindy Morris, who were onsite for the whole week. What did you learn from observing their relationship with the animals and what were their thoughts on the ambitions of the project?

Butler: Yes, Cindy, Kevin and other members of their team came to care for the animals. I should preface my answer by saying that we had an existing relationship with this team, having worked with them on previous projects as well as spending time with them and the animals at their home. So, they know us well and are open to what we were trying to do. They also appreciated our unusual shared sense of care around 'their' animals. Of course, Cindy's and Kevin's profession is based on their experience and knowledge of the behaviour and needs of the animals. Their job is to observe and read the body language, sounds and movements of the animals for welfare and safety reasons. So, this already comes with a whole body of knowledge or set of experiences around what they know from paying attention to animals. Of course, we are also aware that all humans carry with them a set of associations about animals which may or may not be true, but which are applied in this case in the context of their role as wranglers.

What I'm saying – again - is it's a complicated relationship. For example, the general consensus on what motivates many animals' behaviour is food. Cindy and Kevin were sceptical about whether or not the animals would have any interest in the humans or 'do' anything other than choose to stay in their pens unless food was a factor. We weren't interested in engaging with the usual ways humans interact with animals because we're sure that animals experience the world in so many other ways and that is what we were attempting to see. Our preoccupation was with trying to understand the desires, needs, feelings of the animals. It meant that Cindy and Kevin trusted we would do what we thought was right for the animals rather than what needed to happen for the project to be interesting or useful, or, and this was never a factor for us, to entertain. It seemed that over the course of the week the wranglers paid even closer attention to the animals than usual.

As the week progressed the reverse happened, and I can only talk from my own experience, not the other animals', but I felt less inclined to approach them or stroke them or be liked by them.

Beddard: Did your relationship with the animals change throughout the project?

Butler: As someone who would always identify as an 'animal lover' - whatever that might mean - I wanted to know the animals, to be close to them and, in that selfish human way, I wanted them to like me! As the week progressed the reverse happened, and I can only talk from my own experience, not the other animals', but I felt less inclined to approach them or stroke them or be liked by them. I had a bit of an epiphany which was clearly about not putting me, the human-animal at the centre of the world. It's obvious but for the first time, I acknowledged myself in my species in the context of all the other species in existence through the act of asking other people to listen, step back and see.

Harradine: The greatest effect of that epiphany is that Sam became vegan during the project, and has been since.

Fevered Sleep
Sheep Pig Goat, performance, 2017, photo courtesy of Wellcome Collection © Fevered Sleep

Beddard: What did the performers learn from being with the animals?

Harradine: That they are also not the centre of the world, perhaps.

Beddard: Did you feel that the audiences were projecting their human emotions and expectations onto the animals or did you feel that the encounters created a space for something other than that?

Sam Butler: That is inevitable, it would take a whole other project to enable humans to reach the point where they no longer project their emotions onto animals. Though I'm sure lots of people approached the sessions with that aim. There were clearly a whole load of projections in that space, of course there were the people who had heard about the work and arrived with an agenda of criticism towards us as artists, preconceptions around how the animals would be treated automatically led someone to conclude, for example, that a still sheep is a scared sheep when in fact, as far as we know, the reverse was true. So, from the outset, there was a lot in that space with us.

I also know that when a group of humans arrives at a somewhat unusual scenario there are layers of anxiety around what will or won't happen. We really noticed this whenever one of the ani-

mals grunted or bleated loudly over our conversation; the nervous laughter from some of the visitors was just a manifestation of this. We worked quite hard to allay those fears, by providing visitors with a context upon their arrival. We invited them to read our research materials. There was also an aspect of managing expectations which was important. We felt that if people had come thinking they would be entertained in some way, or were 'hoping' to see pigs in particular for example, it was best to say upfront that they definitely wouldn't see each of the animals, there was not a schedule of sheep, then pigs then goats, but that it varied. Also in an attempt to address the entertainment factor we said to them, "We haven't planned anything, nothing much will happen, you may be bored…" and we set out the ground rules for their behaviour as an audience to open up that space as best we could for the encounters to be meaningful.

Beddard: How did the interactions with the animals change over the course of the week?

Harradine: We let them decide whether or not they wanted to enter the space. We gave them more space. We (the performers) did less. We zoomed in more. Once we'd got over the initial shock (and, yes, delight and pleasure) of being so closely in their presence (and they in ours), we started to take more time to let them be, to try to see. I guess we also got more confident doing this - doing less - in front of the visitors. We cared less about making it "a good session" or "a good visit" and just allowed things to unfold more gradually. So, whereas at the start of the week we might have asked a question like "can you see if there's a way of dancing that the goats are interested in?" (we were a bit preoccupied with "interest" or by "engagement" at the start), we arrived at questions more like "can you leave a trail of scent with your breath?" or "what happens if you do absolutely nothing? Nothing might happen, but let's see." I think this was also to do with our physical, intellectual, and emotional tiredness increasing over the week, in a way that was ultimately useful. We had to give more space, we had to do less, we had to take more time. But this felt really appropriate in a space where there were already so clearly several different non-human timeframes in operation - the time of the pigs, the time of the sheep, the time of the goats; time to eat, to sleep, to wallow, to play, to watch, to fight, to respond, to ignore, to get bored, to retreat, to explore. All these different rhythms and energies that affected our rhythms and energies ultimately pulled us away from our very human desire to do well and to be highly productive, slowing us right down.

Sheep Pig Goat was built on collaborative research with academics, veterinary scientists, farmers, and others with expertise in animal cognition, perception, and animal-human relationships. Approximately 500 members of the public attended the research studio over the week. Hundreds of feedback cards were collected, all of which have been transcribed as have the conversations from the three accompanying contextual conversation events. The transcripts are held in the archives of Fevered Sleep and at Wellcome Library. For more information about the commission, including a short film, see: http://www.feveredsleep.co.uk/current/sheep-pig-goat/

Sam Butler and David Harradine are the founders and joint artistic directors of Fevered Sleep, an arts company co-located in London and York that works across the UK and internationally. They make work across artforms – performance, film, installation, publications and digital art – which is research-led, collaborative and participatory. feveredsleep.co.uk

Practicing Post-Nature

Artists working with environmental issues are contributing to the study and restoration of the landscape in increasingly tangible ways. Equally nature reserves and zoos are engaging in performative practices that would not be out of place in an art gallery. In relation to Timothy Morton's term "ecomimesis", as well as Judith Butler's theory of performing identity and Donna Haraway's notion of 'making with', this text examines the overlapping practices of art and nature conservation, focussing on cases where artists perform conservation, and conservationists make art in order to question what these practices mean in a post-natural world.

text: **Beth Savage**

In an effort to establish a new gannet colony on Mana Island in New Zealand, conservationists placed 80 concrete gannets strategically around the cliff tops to create the illusion of an existing colony. It was hoped that this would entice other gannets to settle on the island, however, no gannets took the bait. The conservationists persisted, spraying paint to create the illusion of guano and playing gannet calls out to sea until finally, a lone gannet settled on the island.

This gannet began to woo the concrete birds, fixating on one particular 'mate'. Bowing to her and stretching his neck out, pointing his beak skywards. He would rub his head against hers and try to preen her. All the while she remained still and unresponsive. The conservationists named the lonely gannet Nigel No-Mates and for four years Nigel lived alone on Mana Island amongst the concrete birds trying to woo his love.

As the conservationists continued to maintain the colony, repairing the birds and repainting their markings, respraying the guano across the rocks and playing the calls out to sea it was hoped that other birds would join Nigel. Finally, it seemed that all the effort had paid off. Three birds, enticed by Nigel and his concrete companions, settled on the island. Nigel, however, was not swayed by these new arrivals, he resolutely remained faithful to his unresponsive partner.

Despite the conservationists' hopes that he would finally find real love, he ignored the interlopers, choosing to continue his unrequited courtship, until one day, Nigel No-mates, the loneliest bird in the world, was found dead beside his concrete mate. A tragic ending to a heartbreaking tale.

Following his death early in 2018, this story was reported around the world and captured the hearts of people across the globe; Nigel No-Mates the lonely gannet of Mana Island who remained faithful and optimistic to his last breath.

However, beyond the tragic story of Nigel, another extraordinary story was exposed, that of the concrete gannets themselves, which had existed as a sculptural assemblage for over 16 years before Nigel touched down on the island. This incredible, unintentional, artwork reveals an overlap between artistic practice and conservation practice which in turn reveals how constructed our notions of nature really are.

With the concept of the Anthropocene taking hold, it has become clear that we must move beyond the nature/culture divide that we currently perform in our exploitation of the earth's habitats, and relinquish the romantic notion of the purity of nature. This paper will examine how performativity underpins both art and conservation practices and discuss what might be achieved when artists practice conservation and conservationists practice art.

With the concept of the Anthropocene taking hold, it has become clear that we must move beyond the nature/culture divide that we currently perform in our exploitation of the earth's habitats, and relinquish the romantic notion of the purity of nature.

The problem with preservation and the purity of nature.

The basic perception of nature conservation is one of preservation, of keeping somewhere static and pristine. In an age where humanity has touched even the most remote and inaccessible places on the planet, this idea seems redundant, if there is no pristine nature left then how are we supposed to preserve it?

Perhaps the most public critic of conservation in recent years, George Monbiot describes nature reserves as "ecological disasters" which are maintained in a "state of extreme depletion, the merest scraping of what was once a vibrant and dynamic ecosystem".[1]

Department of Conservation/ Friends of Mana Island

The concrete gannet colony with fresh guano (paint) sprayed on the ground © Department of Conservation/Friends of Mana Island

Rebecca Chesney

Collecting Giant Hogweed Heracleum mantegazzianum specimens for the *Invaders Archive,* 2014 © Rebecca Chesney

He writes:

> The people of every generation perceive the state of the ecosystems they encountered in their childhood as normal. When fish or other animals or plants are depleted. Campaigners and scientists might call for them to be restored to the numbers that existed in their youth: their own ecological baseline.[2]

While there is some truth to this in terms of the depleted state of our landscapes and the arbitrary designation of a baseline condition we are aiming to maintain or restore them to, Monbiot's position reduces conservation practice to this one basic perception of preservation. However, nature conservation, like art, is not one practice but a wide-ranging set of practices and approaches that contribute to a broader discipline.

Rebecca Chesney

Giant Hogweed Seeds Heracleum mantegazzianum, screen print, 2015 © Rebecca Chesney

The gannets of Mana Island were one such example of this broader range of practices. The conservationists there sought to restore a gannet population, in much the same way that Monbiot himself argues for rewilding initiatives. Far from maintaining the status quo, the approach taken by the conservationists was one of persistence and adaptability, which embraced a post-natural, artistic solution.

In *Ecology Without Nature*, Timothy Morton argues that we must relinquish our romantic notion of the purity of nature. He suggests that artistic representations of 'nature' are sites in which this notion can be refigured and expanded.

The rendering of an environment through what he terms 'ecomimesis', for example in the description of the author's surroundings in a piece of nature writing, is used "to convey a sense of atmosphere" and creates an "immediate world" for the reader to become invested in.[3] He argues that artworks which reveal their surroundings, bringing the environment to the foreground, attune us to possibilities beyond the idea of a pure untouched 'nature'.

When a baby is born and declared a girl by the doctor, a script is set in motion which solidifies her girl-ness through social norms of behaviour and 'ideal' gender expectations.

The practices that will be discussed in this paper do the same thing, they bring to the foreground the constructedness of 'nature', illuminate the roles that humans and other species perform in these contexts and ask us to critically examine our conception of what is natural. They also offer us worlds in which we can become invested and specific sites in which to expand our notions what human/nonhuman relationships might look like if we embrace a post-natural position.

The examples of art and conservation practices in this discussion are chosen as they might exist in either discipline; they might be at home both in a contemporary gallery or a site of conservation, or else they are discussed for what they reveal about the performativity of current or speculative multispecies relationships.

Judith Butler explains performativity in her writing on gender as how gender is constructed through the enactment of certain behaviours. When a baby is born and declared a girl by the doctor, a script is set in motion which solidifies her girl-ness through social norms of behaviour and 'ideal' gender expectations. In an interview with Liz Butler Kotz states that "gender is an impersonation... becoming gendered involves impersonating an ideal that nobody actually inhabits".[4]

From this imagined 'ideal' stem the socially accepted behaviours that are imposed according to the child's biological sex. These 'acceptable' behaviours are reinforced and repeated throughout her life, deepening the gendering performance. This is not a conscious act or something she can easily change, she is performing a script that has been written by generations of gender extremes, and although these social norms change and develop over time, they nonetheless remain binary: acceptable girl behaviours and acceptable boy behaviours. Her perceived gender identity is therefore constructed, (not necessarily in line with the gender identity she might have chosen) through the repetitions of variations of gender extremes; when the infant body (it) was gendered (her) that was the first performative act in a string of performances which construct 'girl/woman'.

Similar identity performances happen in conservation practices where species identities are constructed both through the behaviours enacted by the nonhuman individual as well as the behaviours we enact towards them. As previously discussed, we currently see conservation as a preservative practice which should maintain and protect the status quo. Through this view, we have labelled many species that thrive in our landscapes as invasive species, and with this label come negative connotations and violent conservation practices.

When we designate a species as invasive, we essentially set in motion a script in a similar way to Butler's explanation of gender identity. We assign certain qualities to these species (aggression, danger, malevolence), we read into their success as a negative for the native wildlife and so the behaviours they enact through their very being alive, cement their invader status.

Unlike Butler's gender identity, in which the individual is caught up in constructing their own identity through the roles they enact, so-called invasive species are co-constructors of their invader identity, with humans being if anything more influential in this process. No individual plant or animal action automatically makes them an invader. As a species, the behaviours they perform are labelled as invasive by humans but have in almost all cases been facilitated by humans. They may be successful in their new habitat at the expense of other species, however this is not a conscious act it presupposes the individual or even the species in that habitat. Let's take the example of the grey squirrel, much vilified by conservationists, this species was introduced by human activity to areas in which red squirrel habitats were already vastly depleted. As the larger greys began to thrive, and red squirrel numbers dwindled due to food competition and disease, the greys became the villains. These 'invaders' have evolved as part of a different ecosystem but happened to fit well into the British landscape. Much like the Japanese knotweed which was brought to the UK to feature in ornamental gardens, or the signal crayfish which was imported to be farmed for food, grey squirrels were introduced by humans and so human behaviour is ultimately to blame for the red squirrels' demise.

Artist Rebecca Chesney's *Invaders Archive* is an ongoing project responding to the spread of so-called invasive plant species in the UK. She engages with and documents these invaders through her artworks, casting their leaves and stems and printing images of their seeds. When these works are displayed, they read much like a natural history collection in a museum.

Contrary to the narrative of these plants as unstoppable, resilient and dangerous, once rendered in blue ink and white plaster forms, the Japanese knotweed, giant hogweed, and Himalayan balsam, seem delicate and beautiful. The intricate documenting of each aspect of these plants' anatomies, strips them of their villainy and renders them as dynamic and complex living organisms.

Conservationists' response to invasive species is generally zero tolerance, the aim is to eradicate the interloper, regaining control of the habitat for the native species. Invasive species are therefore subjected to ruthless and often violent conservation practices. Giant hogweed and Himalayan balsam are either cut down or sprayed with pesticides to kill the plant and grey squirrels if caught, must legally be destroyed humanely and not re-released into the wild. This eradication of non-native species is carried out under the rationale that doing so will protect native species, yet in other areas, native habitats are being destroyed for commercial use of land, for

example, areas of ancient forest and sites of special scientific interest which are in the path of the proposed HS2 train line.[5]

Invaders Archive brings attention to the fact that these 'invasive' plants have become part of the ecosystems they are said to be destroying. They have altered and reshaped the ecosystem, and while this may be detrimental to some native species, the process highlights 'nature' as a dynamic and changing system rather than a static backdrop.

It is understandable however that we should wish to preserve those species which we have caused to become endangered through human activity. The fantasy of the idealised pure state of nature is a powerful one; a tonic to the complicated and often anxiety-inducing world we live in. We like to think that pure 'nature' is out there: that somewhere there is still untouched wilderness.

Part of this fantasy is enacted when we have encounters with exotic animals. The popularity of zoos, for example, reveals our desire to get close to wild animals in a way that simultaneously reinforces our feeling of control over wildness and reminds us that these wild animals still exist somewhere, even if in vastly depleted numbers.

Performing the animal

Zoos are contentious sites in conservation circles. Born from the tradition of the royal menagerie, a collection of exotic and dangerous animals kept to display one's wealth and power, contemporary zoos often try to downplay the element of spectacle in favour of the more noble aim of conservation. They position themselves as sites of education, teaching the public about the plight of endangered species across the world or else as genetic arks, awaiting the extinction in the wild of rhinos and elephants and tigers, with intricate breeding programmes and specimen swapping to prevent inbreeding and preserve strong bloodlines. Animals in zoos occupy a liminal space between wild and domestic, too close to their wild counterparts to be seen as harmless but too accustomed and dependant on their human keepers to fend for themselves, they exist for and because of human intervention into animal lives.

Many zoos organise exhibits into particular zones, tropical, desert, swamp, this is especially evident in reptile and insect houses where the glass tanks become dioramas depicting their inhabitant's natural habitat.

Zoo enclosures are designed with various purposes, to provide a safe and suitable space in which the animal can be contained, to provide enrichment for the animal that resides there, and usually, to approximate the natural habitat of the animal not only for the animal's sake but for the education and entertainment of the visitor as well. Many zoos organise exhibits into particular zones, tropical, desert, swamp, this is especially evident in reptile and insect houses where the glass tanks become dioramas depicting their inhabitant's natural habitat.

However, beyond the depiction of pristine nature, some zoos are using the diorama of the enclosure to explore human/animal interactions in more depth. London Zoo, in particular, has redesigned some of its enclosures to include hints to the plight of the animals they house. One particularly striking example of this is the enclosure for the Annam Leaf Turtle, which has been designed to look like a kitchen as the species is endangered due to its consumption in turtle soup. The turtles swim around a pool that looks like a sink and bask between a large steaming cooking pot and an ominous chopping board complete with a cleaver. This installation certainly makes the plight of these turtles explicit and would not be out of place as an

Annam Leaf Turtle enclosure at London Zoo, 2015 © zoogiraffe

installation in a contemporary art gallery. The placement of the live turtles in a kitchen diorama as a conservation practice brings the environment to the foreground in the way that Morton argues artworks do. In this case, to use this kind of diorama, the zoo is actively acknowledging the troubled relationships between animals and men, and by representing this information in a visually striking way lends it far more weight than the traditional explanation of endangered status on an information board. The move away from the pristine replica of their natural environment also acknowledges that nonhuman life does not exist in isolation from us, but rather is entangled with us.

We must also return to Butler in our consideration of the zoo as well. Zoo animals are ambassadors for their species; the individual stands for the species as a whole and in this sense, they are performing their species identity. The tiger in the zoo performs 'tigerness': it has the same colouring and shape as a wild tiger, its form is recognisable however the human intervention it has experienced means its behaviour is very differently from that of a wild tiger. As

it paces the cage, it echoes the vast distances traversed by wild tigers in their territories yet it cannot ever experience such space, it's keen hunting instincts are somewhat dulled by feeding schedules and carcasses rather than live prey, its hunting behaviours are simulated with meat placed on tall poles that the tiger must climb, or with heavy-duty rope toys and climbing frames which help to approximate the physical exertion experienced by wild tigers. These approximations of wild behaviour that are caused by the captive status of the animal force them to perform their species in a similar way to Butler's notion of performed gender. The external pressures of captive living cause the animal to enact certain behaviours and through this enactment, their species identity is constructed. Just as humans enact variations of a 'gender ideal', captive animals perform variations on a 'species ideal' that they can never live up to.

And this performance of tigerness is brought into sharp focus when zookeepers attempt to perform the animal themselves. In Tokyo zoos, animal escape security drills are run annually to allow staff to prepare and practice animal control and recapture procedures. These theatrical drills are run with a staff member (or two) playing the part of the escaped animal in full plush costume.

The 'animal' stalks around the zoo attempting to evade the keepers who, in their helmets, armed with sticks, nets and tranquiliser guns look like military forces. As they try to corral the wayward 'animal', the spectacle draws attention to the inadequateness of the costumed keeper in relation to the real animals they are portraying.

Over the past few years, images and videos of several of these practice escape drills have been circulated on the internet and in the media, often the public response picks up on the interest of the animals that seem to look on incredulously. A post shared on twitter of a lion escape drill at the Tobe Zoological Park, in Ehime, Japan elicited many of these responses from amused twitter users, with comments such as "Lions are like 'what the hell is this?'" and "They've just taught the lions their emergency plan. I'm not sure that's the smartest move". posted below the video.[6] While the lions themselves may not have in reality felt mocked by the exercise in the way that twitter users were implying, the comparison of the imitation of lion-ness performed by the keeper reflects the lion-ness that is performed by the captive lions.

While the lions themselves may not have in reality felt mocked by the exercise in the way that twitter users were implying, the comparison of the imitation of lion-ness performed by the keeper reflects the lion-ness that is performed by the captive lions.

This militant operation also reveals something about our current relationship with nonhuman life. The pre-empting of the animal 'out of place', beyond the boundaries we have set up for it speaks to a fear that goes beyond the zoo escapee and to a wider fear of animals transgressing human-defined boundaries. Many of the animals in the zoo are endangered precisely because of this fear. As humans encroach on their habitats, forcing them into smaller and smaller designated areas, the animals have no choice but to push back and venture into cities, villages and farmland. Friction with elephants, tigers, lions and polar bears in their home environments stem from our imposition of boundaries that they have no conception of.

Human spectators come to the zoo to get a glimpse of danger and exoticness, but humans like their 'wilderness' caged and contained and manicured. Ingela Ihrman's film *The Toad* gives us a different insight into the human performance of the animal. The film follows a human scale toad as it negotiates an obstacle course in a gymnasium. The 'toad', (Ihrman in an impeccably detailed toad

Ingela Ihrman

The Toad, video (4'17) / performance, 2013 © Ingela Ihrman

costume, complete with huge floppy toes and bulging eyes) clambers around the gym equipment, at times evoking the animal she is portraying with squatting jumps and times looking exactly what she is, a human in an unwieldy outfit. This could be read both as a comment on the difficulties human environments create for nonhuman lives to negotiate and as a comment on humans playing the role of the animal in an increasingly anthropocentric world.

The clumsy, determined progress around the course is absurd and yet serious. This performance reminds us just how bad humans are at managing ecosystems, our clumsy attempts to control and manage wildlife in the past has led to the eradication of entire species. In contrast to the preservative, human-controlled conservation practices that zoos employ, many are calling for a rewilding of the earth and the reintroduction of endangered and extinct species. In these circumstances' conservationists attempt to limit contact with humans to prevent animals imprinting on humans and associating them with food and care. Conservation initiatives that are involved in raising animals for rerelease, use costumes for this purpose and so a new performative dynamic is emerging.

In China, giant panda conservation sites often employ costumes in various levels of quality, from very simple pyjama like suits to full plush costumes. These costumes are soaked in panda urine

to mask human scent and so the conservationists can carry out weigh-ins, medical checks, and releases without the pandas coming into contact with 'humans'.

Similarly, whooping crane conservation has had great success with this method of early care for rerelease. Conservationists in full white costumes and gloves made to look like crane heads can simulate the parent birds and raise broods of young cranes for release. The costumes allow them to monitor the birds while maintaining a distance that will hopefully mean the cranes do not rely on humans in the future.

These pseudo panda and crane performances become interesting exercises in liminal animality. Like the zoo animals we discussed earlier the pandas and cranes in these projects live between nature and culture, learning to live in the wild but being taught these skills by humans. Unlike the zoo animals they do not perform their species identity in a fully human-controlled environment for their whole lives, but rather must become as close to the fully realised embodiment of the species ideal as possible. This must be achieved by learning their behaviours from human agents who are themselves attempting to simultaneously perform the panda/crane ideal and engage in human conservation practice; they perform the animal but not the animal in its true sense, as they must also carry out human tasks.

This attempt to perform panda-ness or crane-ness to limit human contact for reintroduction is a practice that clings to the pristine nature ideal. It attempts to separate 'nature' and 'culture' and yet ironically is perhaps the most muddied practice of those discussed so far.

This attempt to perform panda-ness or crane-ness to limit human contact for reintroduction is a practice that clings to the pristine nature ideal. It attempts to separate 'nature' and 'culture' and yet ironically is perhaps the most muddied practice of those discussed so far. But there are overlaps in art and conservation practice that are already moving beyond this to explore 'making with' other species.

Co-creative practice through restoration projects

Further to these performative reintroductions of endangered species, rewilding and habitat restoration practice also shares a resemblance to land art and environmental sculpture.

Famous artworks such as Joseph Beuys *7000 Oaks* and Robert Smithson's *Spiral Jetty* were conceived as large-scale sculptural interventions into the landscape. While Beuys's work brings green space back into urban Dusseldorf, Smithson's piece becomes a human intervention into an otherwise remote and undeveloped site. Both works, however, have the potential to contribute to the habitat of their respective locations, the oaks providing food and nesting space for urban birds and insects and spiral jetty providing a potential place for wading birds and plant species to thrive.

In the UK, many nature reserves are created as restoration of previous mining sites. For example, Attenborough Nature Reserve in Nottinghamshire is a reserve that has been built on a former gravel mine. The extraction sites of the gravel pits became the ponds that were later developed to attract wildlife. Reed beds were planted to provide a habitat for bittern, floating gravel platforms in the ponds provided nesting sites for terns and sand martins were enticed away from crumbling mud banks to a bespoke concrete residence, designed to provide secure nesting holes for the birds and a prime viewing hide for visitors.

This process of restoration, although fairly traditional in its aims to protect native wildlife can also be seen as co-constructive. Hab-

Researchers caring for and raising young whooping cranes wear full-length costumes to look like adult whooping cranes and prevent the birds from attaching to humans as their parents (imprinting), 2012. CC BY 2.0 Steve Hillebrand/USFWS

itats are created in the hope of enticing specific species and yet it may take a long time for them to begin populating their new homes. Just as the concrete gannets on Mana island required patience, upkeep and re-shaping, restoration at sites such as Attenborough undergo much tweaking and development before they become attractive to the animal. They then undergo further re-shaping by the animals that call them home. This reshaping for and by the animal is precisely what Donna Haraway argues for with her phrase "making with".

The notion of kinship and "making with" underpins Haraway's book *Staying with the Trouble.* The very first page of this text urges us not to focus on "making an imagined future safe" but to learn to be truly present in our interconnectedness with a troubled world. She begins:

> *Trouble* is an interesting word. It derives from a thirteenth-century French verb meaning "to stir up," "to make cloudy," "to disturb." We – all of us on Terra – live in disturbing times, mixed-up times, troubling and turbid times. The task is to become capable, with each other in all of our bumptious kinds, of response. Mixed-up times are overflowing with both pain and joy – with vastly unjust patterns of pain and joy, with the unnecessary killing of ongoingness but also with necessary resurgence. The task is to make kin in lines of inventive connection as a practice of learning to live and die well with each other in a thick present.[7]

Haraway recognises the messiness of interconnectedness. Her assertion that we must "stay with the trouble" does not urge us to strive towards a utopia with all things living harmoniously rather it asks us to see what is really at play, to accept that living together with nonhuman others is uncomfortable and challenging.

Haraway recognises the messiness of interconnectedness. Her assertion that we must "stay with the trouble" does not urge us to strive towards a utopia with all things living harmoniously rather it asks us to see what is really at play, to accept that living together with nonhuman others is uncomfortable and challenging.

While all of the practices discussed so far demonstrate our messy and troubled relationship with nonhuman worlds, many still seem to cling to the 'nature'/'culture' binary that distances us from making real change. The restoration projects at sites such as Attenborough, while still aiming to protect native species in a somewhat managed environment, do however move beyond a nostalgic return to an imagined baseline and become sites in which something new might be brought about. The reserve is an area used both by wildlife and humans, it resembles neither the grass fields it was before the gravel mine nor the pristine untouched ideal of a humanless 'nature'; it has been co-constructed by the conservationists and the animals which have chosen it as their home. While not entirely a balanced collaboration, this is at least an example of conservation practice in which "making with" is possible and in which we might begin to perform new constructive relationships with wildlife.

This concept of "making with" is also at play in the work of artist duo Daniel McCormick and Mary O'Brien who make sculptural artworks that actively restore the environment they are placed in. These works aim to "move away from an anthropocentric point of view" and enhance the ecosystem. For example, their *Nevada Rivers Project* comprises five structures, made from willow and other plants found at the site, which are live staked into the watershed and allowed to grow, develop and eventually break down. Some of these works are constructed so that they rot from the inside to allow insects to populate them, and provide food for fish and birds, others prevent contaminants from reaching rivers and help to prevent riverbank erosion. As the ecosystem recovers and these works break down, they become absorbed into the new habitat they helped rebuild.

Daniel McCormick and Mary O'Brien

Nevada Rivers Project, 2018 © Daniel McCormick and Mary O'Brien

McCormick and O'Brien undertake a lot of research into the biology and ecology of the sites they work on, collaborating with scientists, rangers and local volunteers to co-construct the large-scale works. Each work may go through various iterations before the final form is decided on, due to the practicalities and needs of the site and people involved with the project. This practice, like the restorative conservation practices taking place at Attenborough Nature Reserve and other similar sites, begin to perform a more interconnected mode of human/nonhuman relationship. They are subject both to human agendas and ecological needs and through their creation, they demonstrate both that human intervention can be regenerative and that post-natural habitats need not look entirely 'unnatural'.

Human influence is everywhere, from tree cultivation deep in the Amazon rainforest to litter in the Mariana Trench. We cannot return to a pristine nature ideal as even that which we deem natural is a constructed baseline from a nostalgic past that a few

generations before us looked very different. So, what if we were to embrace our post-natural world? What beneficial futures might be created if we were to stop performing destructive relationships with nonhuman worlds, including conservation practices that seek to destroy all 'invasive' species?

While art can be a space for imagining these futures, the places where art and conservation practices overlap are, as we have seen, the places in which this process is already happening. We are beginning to perform new relationships to wildlife, to attempt to embody the animal or to understand how the animals we keep in captivity perform themselves. In these overlaps, we can begin to be more critical about how we want to depict our relationships, confronting zoo visitors with a turtle in a kitchen rather than an idealised fake habitat for instance, and we are actively embracing co-constructive modes of making habitats.

The story of Nigel the lonely gannet was reported widely as a tragic tale of the fragility of nature in a human world, when in fact it was a triumphant story of conservationists performing post-nature; of conservation practice that went beyond traditional thinking, embraced the messiness of co-constructing human/nonhuman relationships and eventually brought several gannets to the island to settle. The more we begin to perform these co-constructive relationships the quicker we will begin to build multispecies futures to the benefit of ourselves and the nonhuman life with which we share our planet.

Endnotes

[1] My manifesto for rewilding the world | George Monbiot | Opinion | The Guardian [Internet]. [cited 2019 Jun 30]. Available from: https://www.theguardian.com/commentisfree/2013/may/27/my-manifesto-rewilding-world

[2] Monbiot, G. *Feral: Rewilding the Land, Sea and Human Life.* Reprint edition. London: Penguin; 2014. p.336

[3] Morton, T. *Ecology without Nature.* Cambridge, Mass.: Harvard University Press; 2009. p.264

[4] Butler, J. 'The Body You Want' in *Artforum International* [online]. [cited 2019 Jun 30]. https://www.artforum.com/print/previews/199209/the-body-you-want-an-inteview-with-judith-butler-33505

[5] High Speed Rail (HS2) | The Wildlife Trusts [online]. [cited 2019 Jul 1]. Available from: https://www.wildlifetrusts.org/hs2

[6] These Zoo Simulations Of Lion And Polar Bear 'Escapes' Have To Be Seen To Be Believed [online]. IFLScience. [cited 2019 Jun 30]. Available from: https://www.iflscience.com/plants-and-animals/these-zoo-simulations-of-lion-and-polar-bear-escapes-have-to-be-seen-to-be-believed/

[7] Haraway, DJ. Staying with the Trouble: Making Kin in the Chthulucene. Durham: Duke University Press Books; 2016. 312 p.

Beth Savage is an artist and early career researcher. Primarily working with performance, installation and text, she creates art works which examine social ecologies and human/nature relationships. She is currently completing her PhD at the MIMA School of Art, in Middlesbrough and holds an MA in Fine Art from York St John University. She has shown her work widely throughout the UK as well as internationally, including at fringe events to the Seattle Art Fair with Soil Gallery in 2015 and with Galleri Majkens, as part of the Supermarket Art Fair, Stockholm in 2019. Savage has also undertaken major residencies at Camperdown Wildlife Centre in Dundee and with the Nottinghamshire Wildlife Trust at Attenborough Nature Reserve.

The Nature of Appearances

This is an outcome of a long term, ongoing, collaborative art project with evolutionary scientists, Dr Steve Trewick & Dr Mary Morgan-Richards, Institute of Agriculture and Environment, Massey University, New Zealand which explores aspects of the environmental and cultural histories between New Zealand and Great Britain. Serving as both art and science, the project investigates a colony of Clitarchus hookeri phasmids (stick insects) naturalised in the Isles of Scilly, where questions of evolutionary adaption meet the cultural significance of migration and the lingering historic implications of early globalisation.

text and images: **Jenny Gillam**

The SS Arawa took forty-two days to return to England. It left Aotearoa New Zealand on March 27th, 1908 arriving in Plymouth on May 7th, leaving the southern hemisphere's autumn to arrive in the northern springtime.

One of the passengers, Major Arthur Algernon Dorrien Smith, proprietor of Tresco, was returning to the Isles of Scilly via Plymouth with a cargo of approximately 300 New Zealand plants held in Wardian cases[1] for the Tresco Abbey Garden.

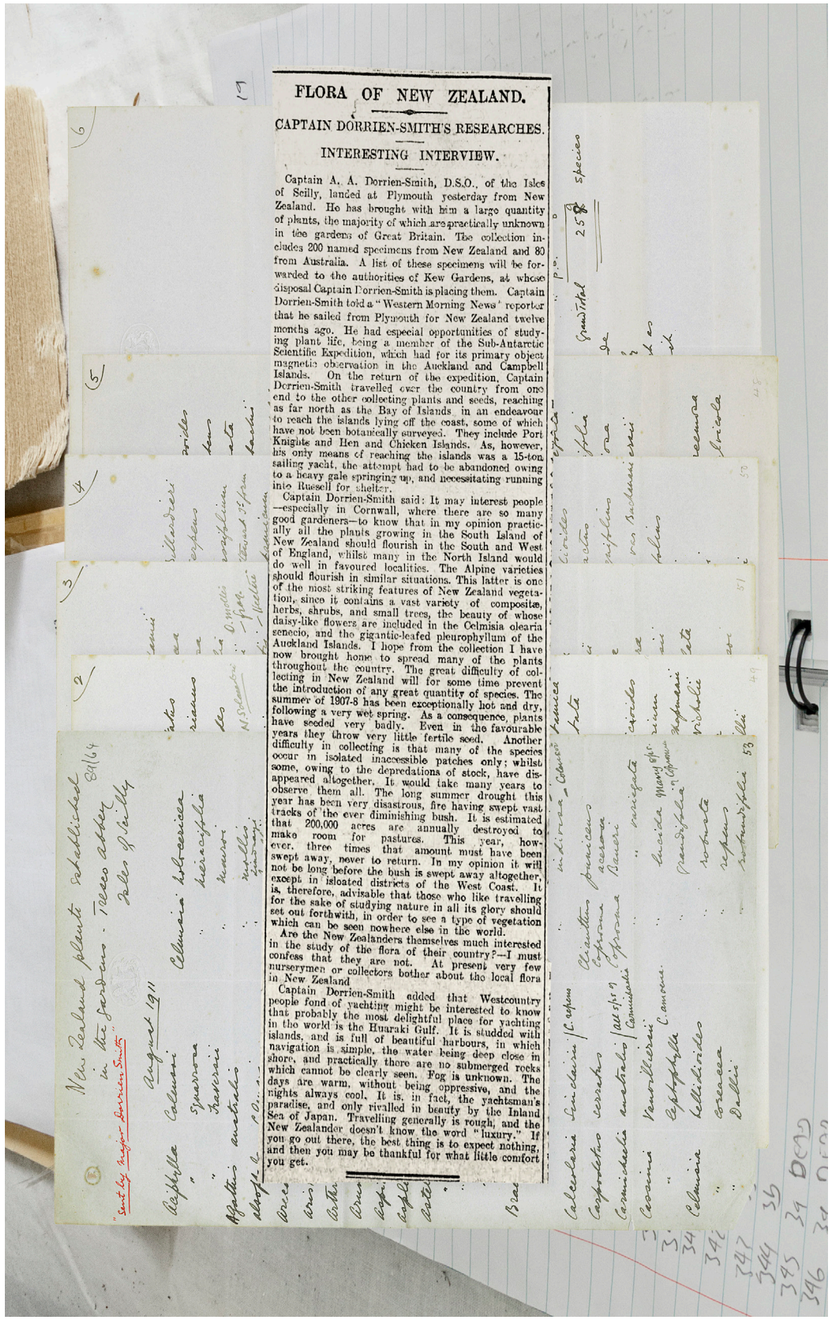
Living in Aotearoa New Zealand, a bicultural country, the ongoing impact of colonisation on tangata whenua[2] is a fraught reality. Attempts to redress its impact are still being negotiated and are often controversial and highly politicised. Colonisation fundamentally shaped our society and continues to be a significant influence on our culture and environment. New Zealanders of European descent tend at times to think rather romantically about the beginnings of the colonial process. We imagine the early settlers struggling in the wilderness, nostalgic for their homeland, bringing familiar plants and animals, and transplanting British values and lifestyles in Aotearoa. The cultural and physical exchange was, of course, much more complex and dynamic. There were many other processes of exchange at play, including expeditions by early affluent horticulturists like Dorrien Smith who would visit with no intention of settling here, rather to collect our plants as specimens for their exotic botanic gardens at home.

This was Dorrien Smith's second trip to New Zealand where he travelled to many parts of the islands collecting seedlings. On this visit, he also accompanied a botany survey team on the 1907 Sub-Antarctic Scientific Expedition to the Auckland and Campbell Islands where they found a vast range of flora and fauna including a number of new species.[3]

It wasn't until the 1930s that stick insects were discovered in the Tresco Abbey Garden, having likely travelled with Dorrien Smith's plants as eggs (or even a single egg) in compost. By searching New Zealand and British archives over a century later we were able to determine the travel dates and times that made it possible for the insects to survive travelling to the other side of the world. Newspapers around this time would routinely announce arrivals and departures of ships, including a list of passengers. Surprisingly

Jenny Gillam

From *The Nature of Appearances,* photographic montage, 2019. PC2 Insectary, Massey University, Palmerston North, New Zealand, 2014. Tresco Abbey Gardens, 2006. Aldersley, David James, Photograph of the ship Arawa in Wellington Harbour 27 March 1908 Alexander Turnbull Library, Wellington, New Zealand. Ref: 1/1-001061-G © Jenny Gillam



FLORA OF NEW ZEALAND.

CAPTAIN DORRIEN-SMITH'S RESEARCHES.

INTERESTING INTERVIEW.

Captain A. A. Dorrien-Smith, D.S.O., of the Isles of Scilly, landed at Plymouth yesterday from New Zealand. He has brought with him a large quantity of plants, the majority of which are practically unknown in the gardens of Great Britain. The collection includes 200 named specimens from New Zealand and 80 from Australia. A list of these specimens will be forwarded to the authorities of Kew Gardens, at whose disposal Captain Dorrien-Smith is placing them. Captain Dorrien-Smith told a "Western Morning News" reporter that he sailed from Plymouth for New Zealand twelve months ago. He had especial opportunities of studying plant life, being a member of the Sub-Antarctic Scientific Expedition, which had for its primary object magnetic observation in the Auckland and Campbell Islands. On the return of the expedition, Captain Dorrien-Smith travelled over the country from one end to the other collecting plants and seeds, reaching as far north as the Bay of Islands in an endeavour to reach the islands lying off the coast, some of which have not been botanically surveyed. They include Port Knights and Hen and Chicken Islands. As, however, his only means of reaching the islands was a 15-ton sailing yacht, the attempt had to be abandoned owing to a heavy gale springing up, and necessitating running into Russell for shelter.

Captain Dorrien-Smith said: It may interest people —especially in Cornwall, where there are so many good gardeners—to know that in my opinion practically all the plants growing in the South Island of New Zealand should flourish in the South and West of England, whilst many in the North Island would do well in favoured localities. The Alpine varieties should flourish in similar situations. This latter is one of the most striking features of New Zealand vegetation, since it contains a vast variety of compositæ, herbs, shrubs, and small trees, the beauty of whose daisy-like flowers are included in the Celmisia olearia senecio, and the gigantic-leafed pleurophyllum of the Auckland Islands. I hope from the collection I have now brought home to spread many of the plants throughout the country. The great difficulty of collecting in New Zealand will for some time prevent the introduction of any great quantity of species. The summer of 1907-8 has been exceptionally hot and dry, following a very wet spring. As a consequence, plants have seeded very badly. Even in the favourable years they throw very little fertile seed. Another difficulty in collecting is that many of the species occur in isolated inaccessible patches only; whilst some, owing to the depredations of stock, have disappeared altogether. It would take many years to observe them all. The long summer drought this year has been very disastrous, fire having swept vast tracks of the ever diminishing bush. It is estimated that 200,000 acres are annually destroyed to make room for pastures. This year, however, three times that amount must have been swept away, never to return. In my opinion it will not be long before the bush is swept away altogether, except in isolated districts of the West Coast. It is, therefore, advisable that those who like travelling for the sake of studying nature in all its glory should set out forthwith, in order to see a type of vegetation which can be seen nowhere else in the world.

Are the New Zealanders themselves much interested in the study of the flora of their country?—I must confess that they are not. At present very few nurserymen or collectors bother about the local flora in New Zealand.

Captain Dorrien-Smith added that Westcountry people fond of yachting might be interested to know that probably the most delightful place for yachting in the world is the Hauraki Gulf. It is studded with islands, and is full of beautiful harbours, in which navigation is simple, the water being deep close in shore, and practically there are no submerged rocks which cannot be clearly seen. Fog is unknown. The days are warm, without being oppressive, and the nights always cool. It is, in fact, the yachtsman's paradise, and only rivalled in beauty by the Inland Sea of Japan. Travelling generally is rough, and the New Zealander doesn't know the word "luxury." If you go out there, the best thing is to expect nothing, and then you may be thankful for what little comfort you get.

Jenny Gillam

Logbook detail, *PC2 Insectary,* Massey University, Palmerston North, New Zealand, 2014. New Zealand plants established in the gardens, Tresco Abbey, Isles of Scilly, 1911. Auckland War Memorial Museum Library, New Zealand. Ref: MS-89/64. FLORA OF NEW ZEALAND Captain Dorrien-Smith's Researches. Western Morning News (Plymouth) – Friday 08 May 1908, page 7 © Jenny Gillam

Jenny Gillam

Members of the Auckland Islands party of the Sub-Antarctic Islands scientific expedition at a flying camp in the bush, at the end of a working day, Bollons,John Peter (Captain), 1862-1929 :Album of photographs of scientific expedition to the Sub-Antarctic Islands, November 1907. The group comprises: From left: Robert Speight, Dr William Blaxland Benham, G S Collyns (in front), A M Finlayson, Dr Leonard Cockayne (in front), John Smaillie Tennant, H D Cook, H B North, unknown, Captain Arthur A Dorrien-Smith, Edgar R Waite (in front), Bernard Cracroft Aston.Photo: Samuel Page, November 1907Ref: PA1-q-228-31-2. Alexander Turnbull Library, Wellington, New Zealand PC2 Insectary, *Massey University, Palmerston North, New Zealand, 2015* © Jenny Gillam

Jenny Gillam

Tresco Abbey Gardens, *2006.* PC2 Insectary, Massey University, Palmerston North, New Zealand, 2014

© Jenny Gillam

Jenny Gillam

Tresco Abbey Gardens, 2006. PC2 Insectary, Massey University, Palmerston North, New Zealand, 2014

Jenny Gillam

Tresco Abbey Gardens, *2006.* PC2 Insectary, Massey University, Palmerston North, New Zealand, 2014

we were also able to find an image of the SS Arawa[4] leaving Wellington harbour for Britain photographed on the date of Dorrien Smith's departure. Most significantly, we were able to deduce that if the plants had arrived at the Abbey Garden in winter, stick insect nymphs would likely have perished.

Britain doesn't have native stick insects but three species from New Zealand have successfully made it their home. It's funny to think that an insect known for its camouflage abilities was able to traverse the globe unnoticed as a stowaway and settle in the homelands of our European ancestors in a process of reverse colonisation – a colonisation of little tangible impact but significant in the socio-political and genetic histories it encompasses. The *Clitarchus hookeri* found in the Scilly Isles is the only known colony of this genus outside New Zealand. In New Zealand there are both male and female *C. hookeri*, some all-female populations reproducing pathenogenetically, and other mixed populations reproducing through mating.[5] There are only female insects in Britain. Unlike many of their New Zealand counterparts the all-female population, reproducing without males, have made genetically identical daughters for over 100 generations.

The last century has seen a significant shift in migration and biosecurity throughout the world. New Zealand's biosecurity is now amongst the strictest in the world because our economy is so reliant on farming and agriculture. Still, the long term implications of colonisation and the impact of introduced species has meant that some of our unique native flora and fauna is now vulnerable to extinction. Our current levels of biosecurity have meant that, while originating from New Zealand, these expatriate stick insects can now only return to New Zealand if they are held in a physical containment (PC) facility.

Between 2014 and 2018 a PC2 building at Massey University, New Zealand held live specimens of *C. hookeri* hatched from the eggs of the Scilly Isles stick insects. Evolutionary scientists, Dr. Mary Morgan Richards and Dr. Steve Trewick tried to crossbreed *C. hookeri* females from the UK with males from New Zealand to better understand the evolution of different reproductive strategies. Genetic testing has indicated that the Scilly Isles *C. hookeri* originally came from a population in New Zealand that included male insects, so it is of particular interest that they were able to reproduce pathenogenetically after traveling around the world. Crossing experiments revealed that although the Scilly Isles females mated with New Zealand males they mostly produced daughters. Despite being without males for only 100 generations the Scilly Isles females have acquired "a barrier to fertilization" and produced only about 3% of their offspring via sexual reproduction (sons and daughters).[6]

Alongside this genetic testing, several multimedia artworks about the *C. hookeri* have used scientific parameters to test theories of perception and behaviour; another drawing on this complex historical narrative and the lingering implications of early globalisation. A vivarium of live stick insects was included in each of the exhibitions.[7]

The Nature of Appearances juxtaposes historical ephemera of Dorrien Smith's expedition alongside contemporary photographs of mature New Zealand plants in Tresco Abbey Garden, Isles of Scilly taken during field research in 2006, and visual documentation of the PC2 insectary at Massey University, New Zealand during initial cross-breeding trials in 2014 and 2015. These digital montages bring together disparate elements of this little known colonial narrative in an investigation of how seemingly small occurrences can reverberate through time and across the space of the globe, reflecting the historical conditions that have shaped and continue to impact upon our environment, society and culture.[8]

Endnotes

[1] Wardian cases were designed by Londoner, Dr. Nathaniel Bagshaw Ward, in the early nineteenth century. The cases created a self-watering system by re-using condensation on the glass panels to enable living plants to survive long trips from the far corners of the globe.

[2] Tangata whenua are the indigenous Māori people. It translates as 'People of the land'.

[3] The Museum of New Zealand, Te Papa Tongariwa holds the holotype of the *Xanthorhoe oxyptera* Hudson moth collected by Dorrien Smith in the Auckland Islands 21 Nov 1907.

[4] As an aside the SS Arawa appears to be named after Te Arawa, one of the seven Māori ocean-going, voyaging waka (canoes) used in Māori migrations to Aotearoa New Zealand sometime between 1250 and 1300.

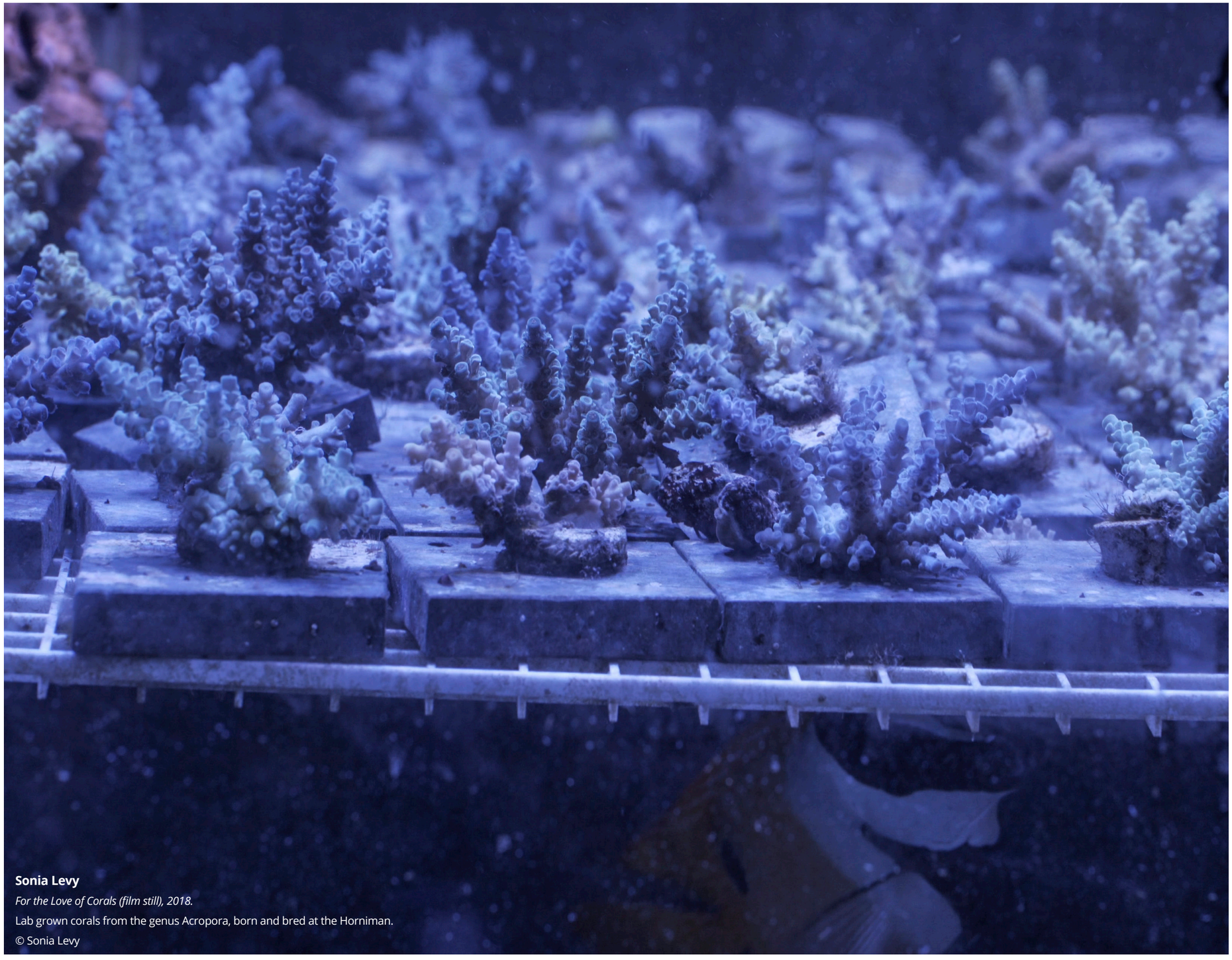
[5] Morgan-Richards, M.; Trewick, S.A.; Stringer, I.A.N. Geographic parthenogenesis and the common tea-tree stick insect of New Zealand. *Mol. Ecol.* 2010, *19*, 1227-1238. ISBN 10.1111/j.1365-294X.2010.04542.x.

[6] Morgan-Richards, M.; Langton-Myers, S.S.; Trewick, S.A. Loss and gain of sexual reproduction in the same stick insect. *Mol. Ecol.* (under review).

[7] *In Search of Self-Perception* (2010) Gillam, J., a multimedia installation at City Art Gallery, Wellington, New Zealand observed how two forms of stick insects moved around a vivarium in relation to the plants contained in it, and whether they attempted to remain on the plants that best camouflaged them.

Sinatra vs Bublé – The Summer Wind (2011) Gillam, J., a multimedia installation at The Engine Room Gallery, Massey University, Wellington, New Zealand playfully employed scientific methodologies observing 10 (non-hearing) insects' movement to two audio tracks played simultaneously – Frank Sinatra's 'The Summer Wind' from the left-hand speaker, and Michael Bublé's 'The Summer Wind' from the right. *At a distance of forty-two days* (2015) Gillam, J., Hansen, E., a large scale multimedia installation at Te Tuhi, Auckland, New Zealand presenting aspects of the Scilly Isles *C. hookeri* journey.

Jenny Gillam's art practice investigates visual constructs of the socio-politics of ecology. It engages with aspects of current debate around ecological tensions; humankind's relationship with animals and our place in the natural world. The resulting installations include elements of photography, audio, moving image, sculptural objects, as well as researching with living organisms within the gallery. She develops exhibitions as series, each extending a particular set of ideas, sometimes in a site specific manner and often produced collaboratively with other artists or with researchers from other fields. She studied photography in 1992-1993 at Carrington Polytechnic and gained an MFA from RMIT, Melbourne in 1999. She is a senior lecturer in the School of Fine Art, Massey University, Wellington, New Zealand.



Sonia Levy
For the Love of Corals (film still), 2018.
Lab grown corals from the genus Acropora, born and bred at the Horniman.
© Sonia Levy

For the Love of Corals

Project Coral *is a coral restoration research project located at the Horniman Museum and Gardens in London. Behind-the-scenes, lab-tanks have been designed to mirror the exact environmental conditions of the Great Barrier Reef, enabling corals to spawn within this mesocosm – a world first.*

For the Love of Corals *is an artist film which follows Project Coral as a case study of new paradigms for multispecies living, environmental conservation and natural history that are emerging in the wake of, in Bruno Latour's words, the "New Climatic Regime".*

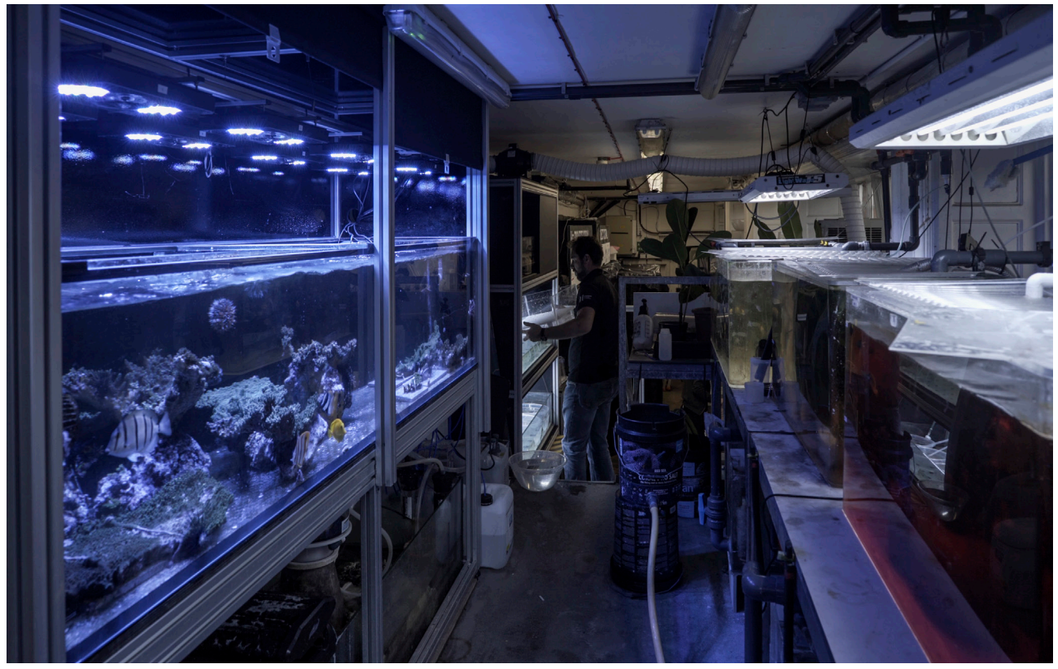
text: **Sonia Levy and Nella Aarne**
images: **Sonia Levy**

In the basement of the Horniman Museum and Gardens in London a team of marine biologists and aquarists led by Jamie Craggs have initiated *Project Coral,* a pioneering endeavour to breed corals in captivity. By mirroring the environmental circumstances — seasonal temperature changes, solar irradiance and lunar cycles — of the Great Barrier Reef within specially designed tanks, the team has become the first in the world to successfully spawn corals in a laboratory.

Levy has followed Project Coral since late 2017 as a case study of new paradigms for multispecies living, environmental conservation and natural history that are emerging in the wake of the new climatic regime. As a model of a sensitive ecological unit that comprises a multispecies assemblage, coral demonstrates how individual beings are not separate from their environment but, on the contrary, by their sheer existence constitute environments for other beings and contribute to all surrounding ecosystems with complex and far-reaching effects. Project Coral expands that assemblage to include scientists, aquarists, and a range of other human and nonhuman actants. The physical form of coral also subverts the canonised animal, vegetal and mineral categories of natural history, which are embedded to the public displays of the Horniman itself. Levy examines how this architectural context of a museum with a living collection — which still echoes the Enlightenment values of human mastery over nature — can become a base for a project that might exemplify a collaborative multispecies survival endeavour.

For the Love of Corals is a cinematic inquiry that focuses on the daily labour of caring for endangered beings to resuscitate them from their imminent human-induced extinction. The technology of the ad hoc laboratory; scientific knowledge; the complexity of marine ecologies; and the intimacy of providing care converge in the precision of sustaining coral IVF. Whilst keeping the coral in captivity is, dishearteningly, the fundamental condition of Craggs's research, the scientists and the coral also become entangled in sharing a space for living, working and world-making, expanding the range of possible worlds in common.

Craggs's project and its setting within a museum provide an illuminating lens through which to examine the colonial Western notions of human exceptionalism that have justified the irresponsible exhaustion of the Earth and its life forms. Linking Craggs's ongoing endeavour with historically significant artefacts in the Horniman archive and collections, *For the Love of Corals* weaves together a range of narratives, perspectives and temporalities to address the registers and frameworks in which we have sought to understand life on Earth, and to think towards a new paradigm for multispecies living.



Sonia Levy

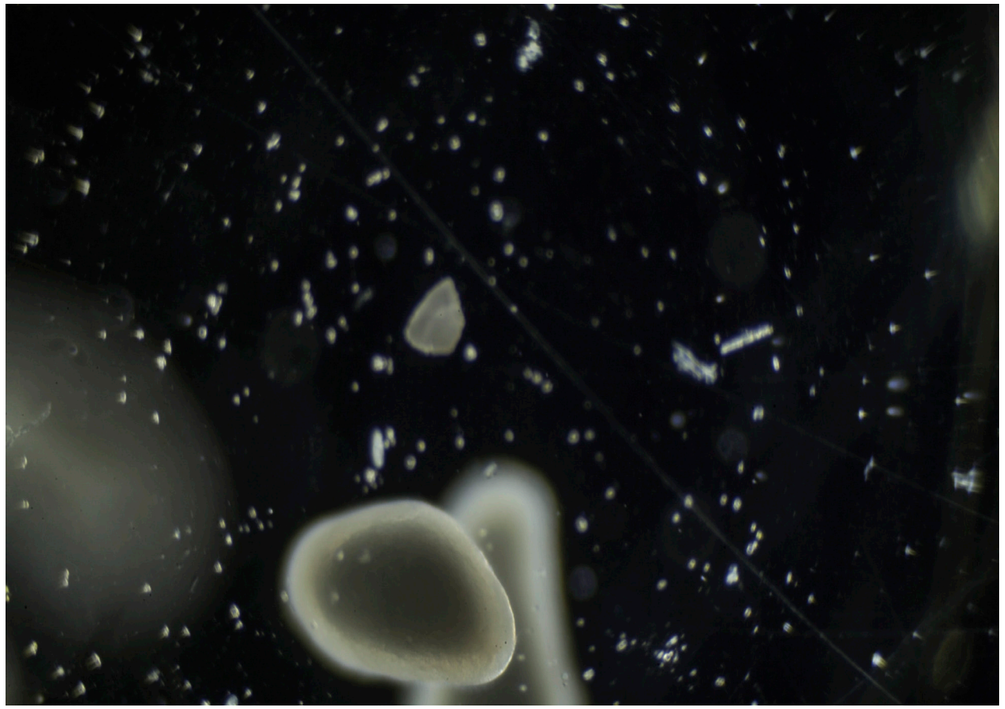
Top: *For the Love of Corals (film still),* 2018.. Details of the Horniman Natural History Gallery. With kind permission from the Horniman Museum and Gardens © Sonia Levy

Below: *For the Love of Corals (film still),* 2018. Project Coral basement laboratory, behind-the-scenes at the Horniman © Sonia Levy

Sonia Levy

For the Love of Corals (film still), 2018.

Details of a lab coral from the species Acropora millepora



Sonia Levy

Top: *For the Love of Corals (film still),* 2018. Coral larvae in their free-swimming stage 24 hours after IVF procedure at the Horniman © Sonia Levy

Sonia Levy is a French artist whose research-led practice considers new forms of engagements with nonhuman life forms. Her installation, sculpture, drawing and video works operate at the intersection of art and science, interested in redefining our relationship with the Earth. Levy has exhibited in the UK and internationally including exhibitions and screenings at Centre Pompidou, Paris; Musée de la Chasse et de la Nature, Paris; Muséum d'Histoire Naturelle, Paris; ICA, London; BALTIC, Gateshead; Obsidian Coast, Bradford-on-Avon; Goldsmiths, University of London; The Showroom, London; Pump House Gallery, London; Verksmiðjan á Hjalteyri, Iceland; and The Húsavík Whale Museum, Iceland. Her work has been published in Verdure Engraved, The Learned Pig, Billebaude and has appeared in NatureCulture and Parallax. She has presented her research at the Iceland Academy of the Arts, The Oslo School of Environmental Humanities and AURA: Aarhus University Research on the Anthropocene.

Nella Aarne is a curator living and working in South West England and London. She is the Co-Director of Obsidian Coast with artist Sam Smith, and the convener of the Of Animacy Reading Group at the ICA, London. Envisaging feminist and environmentally sustainable modes of practice, her work considers collaborative learning and notions of productivity. She is invested in critical thought that calls for heightened sensitivity to our own socio-political and material entanglements with boundless subject positions, histories, living beings, molecular compositions, technological apparatuses and infrastructure. Nella has worked on curatorial projects for Arnolfini, ICA, Glasgow International, Art Licks Weekend and Science Museum.