

# Generic humanity: interspecies technologies, climate change & non-standard animism

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## ABSTRACT

How could we reconcile these two ethical and political projects: on the one hand, a desire to seek a politics beyond the existing history of humanism, on the other, a precaution to not fall in line with the violent history that dehumanisation had already amassed? In the Anthropocene, art is often charged with the task of “fictionalising” nature beyond the known and the human; yet in this paper, I propose that it could also produce a science-fiction or a philo-fiction of *humanity* itself. Looking at various examples of Natalie Jeremijenko's work, I argue that she approximates a politics that does not yet exist: a practice of “generic humanity” in times of interspecies environmental vulnerability. Theorising her work at the intersection of animism and non-philosophy, I label it a non-standard animism, a modelling of governance through non-standard personalisation, which provides cross-species, biometric tools.

## KEYWORDS

Non-philosophy, animal studies, the Anthropocene, environment, media arts

## Introduction: Anthropomorphism is not human enough

Testifying to the progressing entanglement of fossil fuel extraction, overpopulation, industrialisation, climate change and the extinction of species, the term “Anthropocene,” as Heather Davis and Etienne Turpin argue, is “not merely descriptive; it is a social imaginary that has exceeded its intended categorization and whose parameters delimit ways of thinking about the world well beyond the confines of geo-scientific debate” (7). The seeds may have been sown in the field of the natural sciences, yet it is the arts and cultural theory that blossomed into an array of mutated flowers, a “science-fiction concept ... that pulls us out of familiar space and time to view our predicaments as if they belonged to a distant land” (Swanson et al. 149). On an unprecedented scale, artists and scholars have the opportunity to weigh in on the issues usually relegated to the sciences because “there is an increasing recognition that the biggest roadblocks preventing [successful environmental policies] are political, social and cultural, rather than scientific and technological” (Wiseman 29). The Anthropocene configures multiple ways for artists to travel into this newly estranged territory that we once called “the environment.” Like the mutated daisies growing near Fukushima or the rolling grassland that turned the filming crew of *Mad Max: Fury Road* away from the previously barren landscape of Broken Hill in Australia, the arts feed off the speculative radiation and unexpected changes that the current (intellectual) climate allows. Raqs Media Collective, for example, writes that “without a recalibration of the senses, at the level of our global species-being ... we cannot conceive of another mode of production, another set of social relations, another ethic” (114).

This speculative drive is weaving an aesthetic and thematic alliance between academia and the arts, clocking in at the denial of “humanity” as a productive term. Artists who seek to move focus beyond the immediate human everyday, extending it into the animal, vegetal, mineral, machinic and cosmic are reaching towards post-humanist theory. Ani Liu of MIT Media Lab, whose multimedia work aims to further human-plant intimacy, quotes speculative realism as her framework, while Pei Ying Lin’s collaborative media art is “influenced by the notion of vibrant matter, which [political theorist] Jane Bennett uses to counter the prevailing discourse in favour of hyper-consumption and capitalism” (“Living Ashes”). Icelandic superstar Björk corresponded with philosopher Timothy Morton, asking him to help her define “what ‘ism’” she was: “I would like to offer a collaborative hand and wave hi to theory ... the human is not at the centre of the world, and the Anthropocene stuff is also spicy [*sic*]” (“Björk’s Letters”). If there is a unifying tendency to much of “Anthropocenic” art it is the task of fictionalising nature, of making it less familiar and less human; a desire to leave humanism behind and move “towards an open field of naturecultures, infrastructure assemblages, and other newly contested territory” (Davis and Turpin 15). A speculative, unknown environment beyond the human lingers in the background as “nature” divides itself, as if in a process of mitosis, into countless contextually delineated environments, where culture and nature melt into something else, the ‘new’ – as in the new materialisms, which disobey structural dualities between human cultures and nonhuman natures (Dolphijn and van der Tuin). This mutiny against the human in intellectual

and cultural practice finds its roots in the dissatisfaction with the *anthropos*, an avatar of colonial, patriarchal, white techno-supremacy that various alternative names for the *Anthropocene* try to articulate, including the Eurocene (Sloterdijk) or the Capitalocene (Moore). No wonder, then, that art in the Anthropocene, especially one that localises its politics in the spectrum of environmentalism, seeks to erase the presence of the *anthropos* who “at the apex of his insanity has even proclaimed himself a ‘geological force,’ going so far as to give the name of his species to a phase of the life of the planet” (The Invisible Committee 32). When humanity itself is interpellated as the subject of a crisis, ethics and politics might take the form of creating a discursive shelter for nonhuman otherness, an escape from the figure of the human, which is perceived as corrupt (Braidotti).

There is, however, a certain ambiguity to this erasure of humanism. As Alexander Galloway points out, in admitting himself to be a geological force of epic proportion, on the level of discourse man sketches himself as ontologically peripheral and on-par with any organic and inorganic being (“Warm Pride”). As if ontic sins could be repented for in rituals of ontological chastity, theory produces varied configurations of post-humanist becomings, for example, arguing that humans can become animals or plants through affective or artistic practice (Stark and Roffe), or – more recently – that humans are just one object among objects (Bryant). Humanity as a category comes under fire as criminal by the vice of its history and as a unified species to be persecuted for its failed stewardship. Yet, writing in the context of environmental rights, in *What We Bury at Night: Disposable Humanity* Micronesian activist Julian Aguon argues that it is precisely the denial of humanity to those considered sub- or nonhuman that is the most pressing problem in the Anthropocene, as it has been throughout the modern history. Instead of dissolving the human into a multiple nonhumanity, Nicholas Mirzoeff argues that the “most radical possible gesture would be if all living people were considered fully human,” but that “this renewed equality should be taken further to include nonhuman actors” (227).

How could we reconcile these two ethical and political projects: on the one hand, a desire to seek a politics beyond the existing history of humanism, on the other, a precaution to not fall in line with the violent history that dehumanisation had already amassed? Could artistic practice draw a different kind of dynamic than that of unknown nature and the known (and disregarded) human? In the ruin of past discourses and practices, how do we chart the ethical and political sphere of artistic practice, well-aware that sending troops into uncharted territories risks turning into a Sisyphean spectacle, where the aesthetics of post-humanist transcendence subsume under their thrill the specific violences that fuel the spectacle of the Anthropocene? Who is this human that lurks in the distributed climate catastrophe and what if his body does not fit the well-studied contours of the *anthropos*? If the Anthropocene is indeed a “science-fiction concept” that fictionalises “nature” beyond what is known, I will argue that Natalie Jeremijenko's practice is likewise a science-fiction practice, but one that fictionalises *the human*. While the patterns of environmental change are often imperceptible, for Jeremijenko, who works as an artist, engineer, computer- and neuroscientist as well as an activist, it is vital that art “translates techno-

scientific, industrial and political resource allocation issues to be self-evident to the everyman, such that they could act as if they were self-evident” (Bratton and Jeremijenko 31). The focus of political practice, she further argues, needs to shift towards giving people the capacity to “recode the code,” to hack the patterns of multispecies governance (46). She approximates a politics that does not yet exist: a practice of “generic humanity” in times of interspecies environmental catastrophe, rising vulnerability and the global health crisis, where the environment is “relative to the being whose environment it is,” as Tim Ingold would argue (20).

Focusing on the concept of generic humanity and the practice that it entails, I will read Jeremijenko’s work through the lens of animism, taken in its interdisciplinary, polluted and multiple form as an ontology that takes personhood to be the organising unit of existence (Bird-David, Harvey) and the non-standard philosophy of Francois Laruelle. What interests me in animism is its insistence on anthropomorphic personhood in spite of the more prevalent trends of theorising nonhumans in terms of agency, matter, life, flow or becomings. What I take from Laruelle is the definition of personhood as distinctly human but radically underdetermined and generic. I will call this framework a non-standard animism. The main proposition of non-standard animism is as follows: anthropomorphism, as long as it remains representational, is not human enough. Unlike in colloquial anthropomorphism, in non-standard animism the human cannot be “projected” onto anything because he remains radically generic and underdetermined (human=x). As an artistic or environmental practice, it retains the *humanity* of anthropomorphism, yet does away with the desire to capture, represent and project a defined human quality onto nonhumans. This is contrary to a representational (standard) anthropomorphism about which Donna Haraway writes: “animism is patently a human representational practice” (174), while Galloway states that “[to anthropomorphise] is to project onto the rubric of psychology, rather than to understand [a nonhuman] through its own logic” (“Language Wants” 326). In non-standard animism, however, because the human remains underdetermined in a Laruellean sense, it cannot be “projected.” Art practice becomes instead “an expansive mutation or alteration ... that reverses the narrowing action of philosophy that always condenses the human according to a single model” (“The Animal Line” 114).

The idea that humanity can be determined by philosophy is what Laruelle perceives as its greatest sin, its “decisionism” (“Transcendental Method” 150). This single pretension that unifies philosophy is an assault on humans – philosophy does its harm through overdetermination, hallucinating itself in the place of the real and of humans (“General Theory of Victims” 1-7). Non-philosophy instead encourages a “philo-fictionalising” of the human beyond the standard model, arguing that “philosophy is [a material] made for man, not man for philosophy” (“Principles of Non-Philosophy” xv). In Laruelle’s anthropomorphic thought, the real is no less than man-in-person, the ordinary human without the cloak of philosophical humanisms: “I say that Man is the Real, that we are the Real” (“Intellectuals and Power” 50); “Man is precisely the Real foreclosed to philosophy” (“Dictionary” 30). As John Ó Maoilearca writes, “this can easily side-track the novice reader of non-

philosophy” (“The Animal Line” 116) who might perceive it as a reinstating of the *anthropos*, “a particular kind of being invented by Enlightenment thought and brought into operation by modernization” (Swanson et al. 7). This is, however, not the case. While Laruelle’s man is axiomatic, he is not defined. “Non-philosophy does not know what or who man is, only that man is indefinite” – this anthropomorphism is not projecting, but rather permitting the real to mutate and expand who man is (“The Animal Line” 115). This is especially evident in Laruelle’s recent work on ecology, where he writes that he seeks “the human life and knowledge in all animal and plant life,” a “humanity without humanism,” a suspension of the prevailing representations of humanity (“In-the-last-humanity”).

It is because Laruelle’s thought is so strongly anthropomorphic that I read it alongside animism, which has for many decades been discarded for its anthropomorphism, yet now is making a comeback due to its focus on the nonhuman (Harvey). I refer to animism in accordance with its recent reclaiming in anthropology as an ontology that takes personhood to be the organising unit of non/human existence (Descola). [1] In contemporary anthropology, a number of scholars, including Bird-David, Viveiros de Castro, Ingold, and Willerslev treat animism as a framework in itself rather than an object of analysis. In this broad application, animism is an archipelago of practices in which nonhumans are engaged as anthropomorphic persons and manifest idiosyncratically in various geopolitical locations, from native practices in Siberia (Willerslev) to the humanisation of plants by gardeners in Northern England (Degnen), or of humanoid robots in international corporate laboratories (Richardson). Descola’s classification of ontologies into totemism, analogism, and naturalism takes animism to be an ontology in which humans and nonhumans share an interiority, such as “intentionality, subjectivity, reflexivity, the aptitude to dream,” while differing in physicality, “form, substance, physiological, perceptual, sensory-motor, and proprioceptive processes, or even temperament as an expression of the influence of bodily humors” (18). These nonhuman persons are not speculative but specific – as Irving Hallowell observed, animism holds that not all rocks are persons at all times, but that personalisation is a tool deployed in social, ethical and political pursuits.

### Interspecies health tools

While Michel Foucault had already observed that “[the management of] health and physical well-being of the population in general [is] one of the essential objectives of political power,” (277), planetary climate change forces us to consider how this “medico-administrative” (mis)management extends to other species. Quoting from the Hippocratic Oath, Jeremijenko contends that “the greater part of the soul lays outside the body . . . treatment of the inner requires treatment of the outer” (“The Art of Eco-mindshift”). “The soul” (*anima*) is no longer a “spiritual” matter, nor is it a component of a religious structure. In times marked by techno-scientific and medical progress, but also a global healthcare crisis, Jeremijenko’s practice redefines health to be a matter of multispecies well-being and her extensive work has

[1] Animism is a metamorphic term that charts the changing discursive relations with the nonhuman and is in constant discussion with anthropology, as well as indigenous and decolonial scholarship, which can speak from an authoritative position on what traditional indigenous animism is (Hogan). It has a complicated lineage and no unified meaning.

Popularised by Sir Edward Tylor in 1871, it became most known in its anthropological incarnation. It is colloquially understood as “a belief that inside ordinary visible, tangible bodies there is a normally invisible being: the soul” (Harris 186). The “animistic” ideas of early anthropology are in fact an entanglement of vitalism and of European animism as developed by the ancient Greek philosopher and poet Empedocles (Haller 81-88) or pre-Socratic Ionian Thales of Miletus, who perceived matter as animate and “full of gods” (in Harding 374), as well as the Italian hermeneutics in the Renaissance, such as Pico della Mirandola or Marsilio Ficino, who wrote about the *anima mundi* (soul of the world). The best known of these theorists and magi was Giordano Bruno who described celestial bodies

as persons possessing animal souls and was burnt at the stake for his heresies. Upon its migration to anthropology and the colonial discourse, animism embodied pejorative assumptions and has been convincingly criticised as a projection of modernist ideas of the separation of the soul and the (social) body onto the practices of indigenous peoples (Bird-David); a projection that not only distorted their practice but served as an excuse both in the oppressions of the Church in Europe and in a violent civilising mission globally. Born from this entanglement of vitalism, spiritualism, ancient Greek philosophy and Renaissance hermeneutics as well as modernist / colonial discourse, animism spread onto multiple disciplines and theories, taking distinct forms in the hands of each writer. To name just a few, it was taken as a vitalistic life force (Stahl), a religion (Frazer), a stage in the development of the rational self (Freud, Piaget), a social structure (Durkheim), a revolutionary subjectivity (Guattari), or a philosophical method (Stengers).

been preoccupied with harvesting emerging technologies for political, ethical and social purposes. Currently heading the Environmental Health Clinic at the New York University, she interviewed multiple physicians in New York to find out that most of their patients dealt with problems irrevocably tied to environmental change, such as asthma or the 400-fold increase in developmental issues in children over the last ten years (“Environmental Health Clinic”). How can we reformulate, she asks, environmental health concerns so that patients could walk out with prescriptions for things that can be done? How can we produce solutions that scale up the local to the global through an ontological shift in defining *the environment* and *the patient*? In setting up the institutional framework of the clinic, aiming for “[a] decentralization of the scientific method [that] itself becomes formalized as a politics” (Bratton and Jeremijenko 19), she often *personalises* nonhumans. Art, science and philosophy are superposed, with the goal of fictionalising the human alongside a non-standard model of interspecies governance.

Although extremely varied, Jeremijenko’s work has been often described as bio-art, intimately connected to the rise of interest in biology following the democratisation of laboratory equipment and software, with both becoming accessible and relatively cheap over the last three decades. In the 1990s, alongside the media frenzy surrounding the Human Genome project, biology was “the hottest physical science ... accompanied by, on the one hand, the inflationary use of biological metaphors in the scholarly disciplines that study cultures; on the other, a wide range of biotech procedures [providing artists with new technical means for creating art]” (Hauser 182). While Jeremijenko’s work has since moved into different territories, she had been already thinking about biological agents as persons in a political context in her early bio-art experiments. In her bio-art handbook, co-edited with Eugene Thacker and published in 2004, *Creative-Biology: A User’s Manual*, Jeremijenko opposes the idea that governmental organisations, private institutions and corporate powers should own the rights to bio-technological research. She recalls an incident in which another bio-artist, Steve Kurtz, was investigated by the FBI under the Patriot Act for the possession of biological agents. As a scholar and a historian of bio-art, as well as a mentor to DIY bio-art hobbyists, Jeremijenko draws attention to how removing the organisms from the network of research and corporate profit and placing them in the private sphere transforms the bacteria from resource or artistic material to potential terrorists with unpredictable capacities.

Nevertheless, in the fifth chapter of the manual, Jeremijenko encourages bio-amateurs to stage interspecies encounters within the domestic sphere. She outlines a series of DIY experiments involving rodents that co-habituate with humans. The state of your mice, says Jeremijenko, is the best way to judge the health of your household. “Milgram’s Mice: Bioinformatics in the Wild” is a play on the infamous social psychology experiment by Stanley Milgram, which tests the subject’s willingness to obey a figure of authority who instructs him to perform tasks contrary to his conscience, such as to administer electro-shocks to unwilling victims. Jeremijenko’s kit enables similar tests for addictive, adaptive and social behaviours. It tests whether mice prefer to administer food, self-medicate, or drink alcohol and whether they would help other trapped mice by organising food delivery. It also

includes human-mice communication channels, such as an instrument that mice can play to denote their preferences, a webcam and an audio interface. These enable learning of specific preferences of individual mice in our households, extending personalisation into methods of gathering knowledge. Some of the experiments that Jeremijenko proposes are: will mice deliver food to a trapped mouse, or would mice in Paris make different social choices than those in New York? “What forms of governance do they use? Do mouse socialists exist without punishment... How do they deal with aberrant behaviour?” (Jeremijenko and Thacker 40). As she states, “these devices are particularly useful for those interested in how ‘your’ mice (i.e. those that share the same local environmental stresses) respond to ‘your’ medication or other substances you like to ingest” (36), and whether the exposure to these particularities influences their social structures. If the tap water in your household is contaminated with anti-depressants, for example, how will that change the behaviour of your mice? She further recommends to “compare your results with lab-based studies, and get a sense of difference” (36). As such, Jeremijenko understands ‘the environment’ to be the field of (non)human cultures, organised by internalities proper to all: cultural structures, desires and social forms. This stands in contrast to an anthropomorphic projection where the animal is the referent upon which the “human” is imposed. Jeremijenko herself perceives a reciprocity in personhood:

Reciprocity would suggest that because mice are used as animal models for everything human, from human cancers, diabetes, motivational, aggressive and addictive behaviour, sexuality, maternal behaviour and for testing anti-anxiety and antidepressant medication, that is, higher cognitive and emotional modelling, then the approximation must work both ways. If they can model us, we can model mice, or put another way, mice stand in for humans as well as humans stand in for mice. So go right ahead and empathize, from your highly communicative urban animal point of view. (36)

Rodent brains are frequently used for research concerning the human brain because of their neurological similarity (see the Allen Brain Atlas project). Without invalidating this approach of locating personhood within an animal, Jeremijenko’s proposition points towards externalised personhood. Mice do not only amass objective data but share personalised practices with their human housemates. It is not only that rodents share their biological and neurological traits with humans but that as specific individuals with whom we co-habituate, they share our diets and addictions, play with our things and pick up our microorganisms. The DIY bio-artist is here concerned with creating situations where personhood can manifest itself in a localised manner rather than with classifying nonhumans as properties, objects or subjects. Where the latter is more about deciding *a priori* or *a posteriori* about the interiority of the nonhuman, Jeremijenko’s “imagining of a new political space [requires] some kind of ontological moves” (Bratton and Jeremijenko 16), for example the reconsideration of humanity and personhood within the activity of producing knowledge about and alongside other species.

In Amerindian animism (perspectivism), transcribed elaborately by Viveiros de Castro, all species pursue cultural activities, such as having a family life, performing rituals or constructing governance. Yet, while we share the same culture with other animals, our bodies are very different. Contrary to the more prevalent idea that it is our bodily urges that unite us with animals, perspectivism posits that our cultures do. It is not that we interpret the world in different ways – we *culturally* perceive exactly like other animals do – but what changes is the world that we see (“Cosmological Deixis” 477-78). Because of my body, I perceive my own blood as human blood, but a jaguar sees it as delicious manioc beer: this is not a metaphor or a relativism but a different geometry, structured according to the perceptual affordances of each species. Here, underdetermination allows for a continuous exchange of perspectives between humans/jaguars (x) and blood/beer. Focusing on generating experiential environmental knowledge, Jeremijenko’s project accentuates the individuality of each body threatened by pollution without producing novel “concepts” about the nature of animality. Without appealing to a new theory of rodent brain or consciousness, she provides platforms for the underdetermination of what exactly does it mean to participate in a culture: it is, however, a generic culture that manifests in local environments without being captured into essentialist norms of what a culture is.

Rodents make choices based not only on their social structures and individual preferences but in relation to their environment: neighbourhoods, cities and apartments where they co-habituate with humans. For Jeremijenko, these spaces are areas of shared vulnerability, where the meaning of humanity and personhood is continually underdetermined, mutated, and localised within the paradigm of pollution, vulnerability and illness. In a different yet equally vulnerable and health-related setting, with the “Shoobox Cage” Jeremijenko weighs in on the solitary confinement of rodents in medical research labs and its impact on their mental health. Although we owe a great share of our medicine to the suffering of rodents, they are routinely mistreated within the medical system. In an infamous experiment in the 1930s by psychologist B. F. Skinner, a caged rat had a choice between administering drugs or eating. Shockingly, the rat opted for a pleasure-induced suicide. Skinner’s interpretation of the result was that the possibility of an immediate reward overpowered not only the rational mind but also the animal’s basic survival instinct. The theory was subsequently used to explain addiction in humans. In the 1970s, however, the “Rat Park” experiment by Bruce K. Alexander and his colleagues at the Simon Fraser University in Canada proved that the rat would have chosen something quite different if it was not placed in solitary confinement and tortured. As Jeremijenko notices, “suicide rates are higher in both incarcerated humans and animals; [it is] the leading cause of death in prisons” (“Creative Biology” 37). In the “Rat Park,” several rats were placed together in a comfortable environment with a lot of possibilities for play, interaction and relaxation, and given the same choice between drugs and food. Not one rat committed suicide or developed particularly addictive behaviours. While we might expect for laboratory experiments to produce universally applicable outcomes, Jeremijenko points out that *laboratory* rodents are quite a specific demographic:



You cannot just catch any old mice and keep it in your lab ... You have to buy rodents at some expense from accredited suppliers who know the pedigree of the mice ... and keep track of what characteristic and modifications they have been bred for.... So, where do companies get their mice? This is where it gets interesting because almost all of the mouse products originate from a handful of mice donated to Harvard by a Boston based fancy mouse breeder at the turn of the last century.... This already strange isolated poodle mouse population [has been further selectively bred] in the rather peculiar environment of the laboratory.... And it is this organism that all of modern human medications, genetic therapies, behavioural studies etc. are developed on. (38-40)

She further adds: “testing ‘biological’ mechanisms without understanding how they are constrained, changed, and modulated by social and external structures ... based on the assumption that [mice] make adequate biological models but not adequate social, political or ethical models; this division is a little forced, right?” (40). However, this division is *not* forced in naturalism, where humans are the only ones with any kind of “internal” qualities, such as the capacity to produce a society, while their bodies are inert and passive materials connecting them to the physical environment (Kohn 7). Because Jeremijenko’s practice aligns with animism, she reveals that the “natural” world is the field of nonhuman cultures, structured by internal qualities such as play and community, although divergent on the level of bodily dynamics from that of the *Homo sapiens*. Mice are different people than humans are because their personhood is expressed through different bodies. For rodents, for example, nesting functions as a form of mental and physical self-care, therefore Jeremijenko provides them with patented nesting material in her “Shoobox Cage” project.

This oscillation between genericness of personhood and the particularity of individual vulnerability is the axis of Jeremijenko’s non-standard animist practice. Where non-standard philosophy says “avoid overdetermination,” animism adds, allow for the emergence of the specific. The former is a necessary condition so that the latter does not get caught up in the representational apparatus of philosophy. Laruelle states that “the generic subject, from its perspective, is not a given individual or a universal humanity in the heaven of Ideas, each time he must take the possibility of his invention” (“Principles for a Generic Ethics” 17). In other words, the humanity of the subject must manifest each time through realist invention and experimentation, instead of relying on the philosophical ideas of humanity (or animality). Laruelle rejects the denial of individuals in the name of philosophy, much like animism “[totally refuses] to countenance unlocalized, unembodied, unphysicalized ghosts and spirits” (Garuba 267). While posing broad questions about how interspecies technologies should be distributed, Jeremijenko focuses on the specific needs of local populations, simultaneously challenging the established definition of humanity through inventing methods for rodent cultures to manifest. The suspension of the standard requirements of “who can model whom” in scientific practice allows for a non-standard understanding of interspecies dynamics, where

both human and rodents configure generic cultures through social behaviours.

### ***Ecce medium: personalising biometrics***

In “Life and Death in the Anthropocene,” Heather Davis writes that the Anthropocene relies on the “narrative teleology” of white, patriarchal techno-destruction, postponing political and ethical engagement with the promise that “there will be a clear, clean and defined end, rather than the much more probable scenario of ongoing devastation, species extinction, and mutation towards a future that will become increasingly toxic” (354). Ongoing pollution and interspecies health crisis are difficult to notice, as is common with environmental damage. Jeremijenko's practice lends these phenomena a visibility and politicises them through constructing interspecies technologies. Commenting on another project, “The Tadpole Bureaucratic Protocol,” she says: “We are witnessing an extinction of amphibians and frogs right now [that is] more serious than the extinction of dinosaurs. And frogs survived the dinosaurs’ extinction, right? But they are not surviving whatever it is that we are doing” (Dissette). Just like mice embody the microbial, social and environmental relations in a given household, tadpoles are receptive to the man-made toxicity in water, especially to endocrine disruptors and t3-mediated hormones. The ingredients in our personal care and cleaning products, BPAs found in plastics and in canned food, pesticides, or antibiotics and hormones fed to farmed animals can make it into a local water supply, and further into the oceans. Jeremijenko informs that “the PCM [polycyclic synthetic musk] value of [a] river [in New York City] is about the same as the PCM value of breast milk in New York” (Bratton and Jeremijenko 41). These disruptors put the health of aquatic animals at danger and alter their sexual and social behaviours by changing the hormonal composure of their bodies (Söffker and Tyler).

Aiming to highlight the shared non/human vulnerability to this imperceptible toxicity and deploying her usual campy aesthetics, Jeremijenko constructed tadpole strollers, in which tadpoles could be taken for a walk and installed in local water samples. Each tadpole was named after the politicians responsible for local water quality, including Pete Grannis and Denise Sheenan of the New York Department of Environmental Conservation. “You can let your neighbors social network with your tadpole,” she says, hoping that this would further the inquiry into local water quality (“The Art of Eco-mindshift”). Ideally, the artwork would lead to a meeting of the tadpole and the politician it was named after, eventually making for an interspecies policy gathering. What is the purpose of staging such interactions? As Benjamin Bratton notices, an image of the collective is “not just a narrative of a political body but is in fact constitutive of that body” (Bratton and Jeremijenko 46). Similarly, in Bird-David’s seminal article on animism, artistic events are one type of humanising activity that aids in reproducing the social, where the performer’s task is to allow for the emergence of non/human personhood. In a parallel manner, Jeremijenko’s work encourages the construction of communities *via* relating humans and nonhumans on the axis of personhood. These practices of reinstating

nonhumans as persons are related to her concern with climate change, an issue that she believes artists must respond to by “taking a global issue and addressing it locally” (Dissette). In this local manifestation of the problem, water quality affects multiple species, eventually making for a damaged environment. The political response should be developed accordingly, taking into account species co-dependence.

Furthermore, the tadpole is both a fellow affected species as well as a “sensitive bio-monitoring device,” an animal medium (Jeremijenko qtd. in Gordon). This non-standard animism is not a projection of what is perceived as human onto the tadpole, but rather an opening up of the term to mutation. Tadpoles are reconfigured as both persons and as animal *media*. They emerge as citizens vulnerable to toxicity, who are also able to *self-produce* knowledge and metrics, rather than to be objects of measurement. For Laruelle, thinking about the environmental crisis is too often “reduced to the denunciation of the devastating relationship of man and animal in the plant arena of the earth”; he is instead interested in “establishing a new Anthropoc principle [where] ecology is a thought ‘in-the-last-humanity’” (cf “in-the-last-instance”), following the principle of unity of all life under humanity (“In-the-last-humanity”). This life is not a general vibrancy, like in vitalism, but is rather indistinguishable from the *lived reality*, a radical realism. This is in contrast to eco-logical thought which, while accepting “the proximity of animal and man [through] affectivity, language, and concern” (“In-the-last-humanity”) is still not able to think the underlying genericness of *human* (x) life in animals and plants, without reducing it to vitalist ideas such as “vibrant matter” (Bennett). With this indivisibility of humanity on a generic level, Laruelle's concern is to “put the protection of man, of animal, and of plant down to human responsibility in-the-last-instance,” where the metaphysical concept of nature is abandoned or modified in order to establish “the protection of man, a decreased suffering for animals, and a moderate use of plants” (“In-the-last-humanity”). Laruelle is thus not concerned with “a new ontic theory of life” but “a theory of a knowledge of life” through life *itself*. Jeremijenko's tadpole project is a way of practicing this theory, where life knows life through itself; where it is both personalised and discreet as well as a type of a biometric device. Her practice, which is ultimately an ethical and political one, is to lend visibility to these interspecies biometrics as a way in which non-standard humanity practices the knowledge of itself.

Jeremijenko's reconsideration of personhood, as much as it is also a practice of a generic theory of humanity, parallels the developments in the environmental law. A few years ago, India's Ministry of Environment and Forests recognised dolphins as “nonhuman persons,” following the inception of the “Declaration of Rights for Cetaceans” (2011) developed by the American Association for the Advancement of Science. In 2016, legislations in New Zealand recognised rivers as nonhuman persons in the eye of the law, with their own rights and protections, following the propositions of Maori communities. The American Nonhuman Rights Project, according to their website, aims to change the legal status of nonhuman animals from things to persons. Jeremijenko explains that her work often stems from an interest in the correlation of property rights and personhood: “If non-human organisms own property,” she asks, “will that change their explicit value in a

market-based participatory democracy?” In her practice the Laruellean humanisation is a form of “structuring participation,” where the role of the artist is to explore the connections between the “non-human and the non-market” (Bratton and Jeremijenko 46; 36) and where the recognition of interspecies vulnerability translates into political/scientific/artistic/philosophical invention, a philo-fictionalising of the human that produces a non-standard governance, which relies on the capacity of organisms to produce and distribute knowledge through ongoing biometric processes.

Jeremijenko’s “Tree X Office” is an open space office in New York owned by a tree, which acts as a landlord, and can self-monitor, tweet and capitalise on its resources with the technology provided for it. Interestingly, this project takes inspiration from an incident of nineteenth century animism in the USA. “The Tree That Owns Itself,” a white oak which fell in 1942, used to be located in Athens, Georgia and was once conferred all legal land rights within eight feet of its location by William Henry Jackson, reportedly a professor at the University of Georgia. An unconventional office space for rent, “Tree X Office” produces power and provides wi-fi. By paying the rent one can supply the tree with resources that it decides how to use: “augmenting the soil with biochar, companion plantings, and other actions at the tree’s discretion” (“Tree X”). In the time when the fourteenth amendment grants personhood rights to corporations, she continues, “[trees can] by virtue of their shareholder and board status in the OOOZ corporation themselves become persons, or active agents – new citizens” (“Tree X”). At the same time, these citizens are also media who know life through life itself – it is because they are biometric media that they are also persons who can participate in the modelling of governance. Jeremijenko points out that her project simply reveals this reality, rather than projecting it:

There is the question of why [the trees] have not been included [in politics] to begin with. They are visible, they are present, they are active dynamical systems, and they do have these very visible growth responses. Why is this not already governance? . . . People are tremendously reluctant to speculate in these terms. They do not feel like they can ask a scientific question and draw on the material evidence before them. I question whether or not this reluctance would be reduced if they received environmental data from these trees via text-message to their cell phone. (Bratton and Jeremijenko 14-15)

“Tree culture” or “tree governance,” just like human or rodent governance is a part of a larger self-knowing eco-literacy: all persons are “self-reporting dynamic adaptive systems [that] participate in the political economy, or help us make sense of environmental variability” (Bratton and Jeremijenko 14). This scientific/artistic/political/philosophical practice proceeds through “a direct personalization of the information in and of itself, and then perhaps of that which the information informs us about” (15). This entanglement of genericness (of humanity) and specificity (of interspecies vulnerability), of personalisation and interspecies technologies or biometrics is evident in a great number of Jeremijenko’s artworks. To name another, “Hudson River

2.0” responds to the dredging of the Hudson River and the threat of the Avian Flu pandemic. Between 1947 and 1977 the Hudson River was polluted with large amounts of polychlorinated biphenyls, causing deaths and illness to wildlife and people who consumed the river fish or drank the water. One of the most significant and well-publicised environmental disasters in recent history, the Hudson River became an activism superfund, drawing attention from multiple artists and entrepreneurs. Jeremijenko, however, calls for “a shift from imagistic representations to interactive [ones]” (“OOZ”). These include human-bird translation devices in order to observe which sounds, noises, perches and arguments make humans most receptive to environmental activism; and a “Glow Fish Interface,” a series of screens installed in the river that light up when fish swim by, so that humans can provide them with designer fish food, which removes heavy metals from their bodies.

This reframing of animals and plants as persons adept at the production of knowledge and thus at participation in governance is a matter of “collaborative survival” in the Anthropocene, which requires “cross-species coordination” (Tsing 155). In *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*, anthropologist Anna Tsing writes that the capitalist narrative of development has “segregated humans and political identities, obscuring collaborative survival” (48). Yet, she continues, “we are surrounded by many world-making projects, human and not human. World-making projects emerge from practical activities of making lives; in the process [they] alter our planet” (52). Like Tsing, who devoted her book to human/fungal cultures, Jeremijenko is aware that nonhumans have their own cultural projects and much of her work is providing a blueprint for interspecies communication patterns. These concerns are visible in “OOZ,” an inversion of a “zoo,” an attempt at “creating a greenspace [as] an invitation for nonhumans to co-habituate with us,” which is also designed to “develop urban animal populations in Zeewolde and particularly within the Verbleeding trajectory” (“OOZ”). As the project’s website describes, OOZ, unlike a zoo, is a place without cages, where animals remain by choice, providing a site of interaction rather than of voyeurism. This “human/animal interface” has two components: “an architecture of reciprocity” i.e. relations are reversible, any action that you initiate at the animal, the animal can initiate back at you, and “an information architecture of collective observation and interpretation.”

Providing species-specific conveniences and technologies that animals can master, OOZ deploys modes of interspecies communications by non-standard means. Animals can control the human visitors by pressing the appropriately designed buttons in order to ask for food. The message is then translated as, for instance, “Yo! If you are going to stare how ‘bout inserting 25 cents and delivering a dose of that biscuit?” In this performative anthropomorphism, it is the animals that are expected to train humans to behave in a certain way, both learning each other’s reaction to stimuli: a reversal of Pavlov’s dog experiments. Jeremijenko sees OOZ as “an experiment in collective knowledge” and the project also functions as “SIMOOZ,” a simulated online database, where visitors can access and annotate information as well as compare data. Jeremijenko thus wants to

understand biodiversity as a scaling process in which nonhuman persons develop governance through their own culture-metrics, “a condition of the backyard” that is also “the development of a participatory eco-literacy” (Bratton and Jeremijenko 51).

### Postscript: Being-human

For Laruelle, the prerequisite to recognise the humanity in other species is always already-fulfilled in non-philosophy as humanity is the *a priori* of animals and plants (“In-the-last-humanity”). As such, his thought here parallels that of the Amerindian animists, for whom all animals and plants were first human in the origin myths, remain human in their current life and continue to see themselves as human (Viveiros de Castro, “Cannibal Metaphysics” 68-74). This priority of humanity to all, both in Laruelle and in animism excludes “the metaphysical priority of man [and] man’s supposed superiority and sufficiency of measurement for others” (“In-the-last-humanity”). As humanity is distributed through other forms of life, the human itself becomes an underdetermined category:

The function of the *a priori* ... is the constitution of an ecology-oriented discipline in a broad sense which exceeds the uniquely [Homo sapiens] concerns about economical survival and spreads the ecological concern to the ensemble of nature and perhaps, who knows, to the cosmos. [This] ideal of a humanisation of nature, of the animal and man himself alike, is [unfortunately] on the verge of being abandoned. (6)

This humanisation or personalisation, rather than being abandoned, forms the axis of Jeremijenko’s practice. Anthropologists Eduardo Kohn and Philippe Descola suggest that the arts can become a vehicle for activating ontologies like animism where they can otherwise seem muted (143), while Laruelle proposes that gestures of non-philosophical realist invention are the refuge for those who otherwise have no voice (“Non-Philosophy as Heresy” 280). In taking humanity/personhood as the underdetermined and factual reality, Jeremjenko’s non-standard animism rehumanises the nonhuman without projecting the *anthropos* onto it. The underdetermined man and the located nonhuman personhood that emerges through inventive practice is then the *anima* that is the kernel of non-standard animism. Non-standard animism thus rests on the genericness of “man” *in order to* allow for individual specificity to emerge *via* political and ethical platforms once each time, without being captured in the web of philosophical representation. In the times when humans are conceptually dissolved into nonhuman otherness, non-standard animism presents an opposite strategy, looking rather for the establishment of communities across the borders of species, while keeping humanity as an “x” that underlies all activist operations. It seeks to explicate the ontological possibilities available to nonhumans at a time when we must be wary of colonising nonhuman ontology for the purpose of aesthetic or existential pleasure. As Ó Maoilearca writes in his book on Laruelle and nonhuman philosophy: “the assertion that [we] think and write ‘for animals’

and even become animal ... is really only [about] human becoming ... the animals' part in this pact most often appears as only a means to an end" ("All Thoughts Are Equal" 201-202). Non-standard animist artists are thus not interested in becoming-animal, but rather in revealing that individual animals can be-human, which also means to be "x."

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