Anna Bunting-Branch

Warm Worlds and Otherwise

Warm Worlds and Otherwise stages encounters between feminist practice and science fiction—using painting, digital animation and Virtual Reality to explore ideas of worldbuilding, embodied perception and technologies of representation. The project was developed over iterative presentations at Wysing Arts Centre (2018), FACT Liverpool (2019) and Derby QUAD (2020).

Central to the project is *META* (2019), an experimental 360-degree animation transforming Anna Bunting-Branch's hand-painted characters, props and backdrops into an immersive virtual storyworld. The work is underscored by an ambient soundtrack created by artist Aliyah Hussain.

Warm Worlds and Otherwise was co-commissioned in collaboration between QUAD, FACT Liverpool, Wysing Arts Centre and The Mechatronic Library. In this essay, Helen Starr, curator and founder of The Mechatronic Library, reflects on the personal and political resonances of the project.

Warm Worlds and Otherwise

Helen Starr

Our memories, real or virtual shape our identities and my memories, my understanding of the politics of race and capital was shaped by violence when, as a small child I watched as my two uncles were shot by people of another race. My uncles survived and my favourite, my Uncle Dinah, was healed by the touch of an Indian mystic. She gave him a parting gift of two necklaces with the names of his children on pendants—which she pulled from the air. I remember Asha's name spinning in gold as she flicked the Hindi letters with her fingertips.

A basalt colossal head from the Olmec civilization of Mesoamerica Veracruz, Mexico, 1200-900 BCE

Dreaming and waking are similar cognitive states. In *I of the Vortex – From Neurons to Self* (2001), Columbian scientist Rodolfo Llinás writes: 'The waking state is a dreamlike state [...] guided and shaped by the senses, whereas regular dreaming does not involve the senses at all.' In both cases, Llinás suggests, our brain generates different models of reality: 'The only reality that exists for us is already a virtual one [...]. We are basically dreaming machines that construct virtual models of the real world.'

Though the mind of another is very difficult to observe, it is important to accept that in our dominant reality, all economic, religious, philosophical or scientific studies on how this world and its surrounding universe works have emerged alongside technologies designed for war. In western cosmology it is standard to expound the power of human beings to improve and reshape their environment with the aid of scientific knowledge, and/or technology, as socially progressive. And it is acceptable to completely disregard historical, geographical and social context in the development and use of said technologies. Despite being continually contested by postmodern theorists, the notion that continuing technological advances—this idea that the arc civilization is inherently progressive and will lead us to a "Golden Age"— is hard wired into the minds of many great western thinkers. Mainly men.

A strong feminist critique of capitalism, colonialism and the use of technology runs through Anna Bunting-Branch's science fiction inspired project, *Warm Worlds and Otherwise* (2018-2020). Science fiction is normally considered to be a way of speculating about our future. However, the insight it provides on colonialism and neo-colonialism is as vital to consider if we want to avoid taking these imperial patterns into the hereafter.

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Notions of colonialism have been written about since ancient times. The concept of the aforementioned Golden Age comes from Greek mythology, and in particular a 700 BC poem by Hesiod called *The Works and Days.* Scholars who have analysed this work have placed it against the background of an agrarian crisis in mainland ancient Greece—a catastrophe that inspired a wave of colonial expeditions in search of new land. In his astute *Colonialism and the Emergence of Science-Fiction* (2008), John Rieder notes that most scholars believe that the modern genre of science fiction coalesced 'in the period of the most fervid imperialist expansion in the late nineteenth century.' Science fiction 'comes into visibility,' he argues, 'first in those countries most heavily involved in imperial projects; France and England,' and then gradually gaining a foothold in Germany and the U.S.A as those countries also moved to obtain colonies through imperial conquests.

For Anna and I, our histories meet when Columbus stumbled upon the Americas in 1492—an encounter recorded in his log:

> '*Thursday, 11 October* Weapons they have none, nor are acquainted with them, for I showed them swords which they grasped by the blades, and cut themselves through ignorance. They have no iron, their javelins being without it, and nothing more than sticks, though some have fish-bones or other things at the ends.
>
> *Saturday, 13 October* They came loaded with balls of cotton, parrots, javelins, and other things too numerous to mention; these they exchanged for whatever we chose to give them. I was very attentive to them, and strove to learn if they had any gold. Seeing some of them with little bits of this metal hanging at their noses...
>
> *Sunday 14 October* I could conquer the whole of them with fifty men, and govern them as I pleased.'

My people, the indigenous Amerindians, had a well-developed culture which stretched far back to the Olmec civilization of Mesoamerica. By 1500 BCE, early Olmec sculptors had mastered the human form and opulent, symbolic artifacts including anthropomorphic creatures exquisitely carved from materials such as jade, obsidian, and emerald.

Caribbean beliefs centred on the supreme goddess Atabey, who called forth the heavens and a pantheon of deities. This was a complex matriarchal cosmology where the interactions between organisms and their biophysical environment were inherent in the thinking about how the universe worked as a whole. Atabey's first creation was the male god Yucáhu, who became the god of agriculture, as well as the zemi of peace and tranquility. Yucáhu took over as a creation deity, becoming a universal architect in order to gather the favour of his mother. In fact, the first European to explore and name the Amazon was the Spanish soldier Francisco de Orellana. He gave the river its name in 1541, after reporting pitched battles with tribes of female warriors whom he likened to the Amazons of Greek mythology. One can only imagine how terrifying this must have been for European men—safe as they were in their patriarchal norms.

The first Europeans to penetrate the Amazon rainforest reported cities, roads and fertile fields along the banks of its major rivers. 'There was one town that stretched for 15 miles without any space from house to house, which was a marvellous thing to behold,' wrote Gaspar de Carvajal, chronicler of explorer and conquistador Francisco de Orellana in 1542. 'The land is as fertile and as normal in appearance as our Spain.' The nutrient rich Amazonian *terra preta* ("black earth") was developed by additions such as charcoal for the sustainable, agricultural ecosystems which fit their underlying ideologies. Even Columbus, with his quest for gold and his need to subjugate through religious reformation, recorded lush and well-tended gardens when he built the first settlement on Hispaniola (now Haiti) in 1492—naming it La Navidad, or "Christ's Mass". Such tales were long dismissed as fantasies, not least because the teeming cities were soon erased by genocide and disease, but it now seems that the chroniclers were right all along. It is the modern vision of a pristine rainforest wilderness that turns out to be the dream.

In *Warm Worlds and Otherwise*, Anna directly confronts our shared colonial past. This painterly inquiry deftly unpicks entrenched Old-World perspectives. In the influential *Politics*, frequently cited by later western and Islamic thinkers, Ancient Greek philosopher Aristotle discusses three different types of relationships that can occur in a household: parent to child, husband to wife, and master to slave. Aristotle defends slavery on the grounds that while men such as himself are naturally leaders or figures of authority, others are "natural slaves". It is in *Politics* where Aristotle really interrogates this question of what constitutes the Other:

> 'those who are as different [from other men] as the soul from the body or man from beast—and they are in this state if their work is the use of the body, and if this is the best that can come from them—are slaves by nature. For them it is better to be ruled in accordance with this sort of rule, if such is the case for the other things mentioned.'

For Aristotle, although both the husband and wife are equal, the husband still rules the household over the woman as that is the role to which he is given by nature. Free men thus have natural born rights over their children, their wives and their slaves.

Current scientific theories have laid waste to Aristotle's flawed binary concept of dualism—that the soul or consciousness is separate from the body. At the same time, theories such as autopoiesis and second order cybernetics have widened classical thinking around the metaphysics of emergence and embodiment. This merging of the two cultures of arts and science has moved ethical concepts around the nature of Being and personhood into the future. Perhaps here there is hope of breaking through the fragile dissonance, which Afua Hirsh calls the 'ever thickening loom of imperial nostalgia', that usually accompanies discussions around the Other.

Playing in the court of the skilled and meticulous scientific illustrator and ecologist Maria Sybilla Merian (1647-1717), Anna situates Warm Worlds and Otherwise in a temporality parallel to Early Modern Europe and the Colonial Americas. This was the period of witch hunts, a time where it was dangerous in Europe to be a woman who showed interest in plants and little-known animal species. By then, the Amerindian world had largely disappeared from the Spanish Antilles and the culture hid itself among the ceremonies of the African slaves and the Catholic saints. In the 1600s, western entomology was a nascent field, largely focused on the study of "useful insects" such as bees and silkworms. This left much superstition around butterflies which, emerging whole as they did from the cocoon, were thought to be manifestations of the soul. In popular belief, butterflies could be witches in disguise, out to curdle cream and butter—hence their name "buttervögel" in German and "butterfly" in English.

Maria Sybilla Merian did much to discount superstitious beliefs damaging to women and traditional healers. Between 1679 and 1683 she published a two-volume series on caterpillars,

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with each volume containing 50 engraved and etched plates. She documented evidence on the process of metamorphosis and the plant hosts of 186 European insect species. Alongside her illustrations, Merian included detailed descriptions of the ecological relations of organisms to one another and to their physical surroundings. Well before Darwin's Voyage of the Beagle (1839), Merian had travelled to the New World and explored the Dutch Suriname, taking her daughter as her only companion. Upon her return she published her own work describing the mechanism of natural selection and the complex relationships between the people of the tropical Americas, the plants, animals and their physical surroundings.

Maria Sibylla Merian, I Flos Pavonis or Peacock flower with example of grey and orange moth c.1701-1705

Although well respected and lauded in her lifetime, by the 1800s Maria Sibylla Merian began to be discredited by various academics for having no formal scientific training—despite the fact that women in Merian's day were barred from a university education. Merian's careful observations (of tarantulas that ate birds, or ants that formed bridges with their bodies) were dismissed as the flights of fancy of an old woman. The naturalist Lansdowne Guilding (1797 –1831) was a theologian and early naturalist. In 1825, he corresponded with Charles Darwin, providing him with notes on the natural history of the Caribbean region. Guilding, who was born in Kingstown, St Vincent and the Grenadines, wrote a scathing critique of Merian's work. In Observations on the work of Maria Sibylla Merian on the Insects, of Surinam, he uses words like "careless", "worthless" and "useless" to describe Merian's engravings and accuses Merian of ignoring facts 'every boy entomologist would know'. In his killshot, Guilding mocks Merian for relying heavily on the knowledge of African slaves and Amerindians. And so, the pioneering work Maria Sybilla Merian was erased until recently when, in the last quarter of the 20th century, her oeuvre was re-evaluated, validated, and reprinted. With her scholarly observations and documentation of the metamorphosis of the butterfly, she is considered to be among the most significant contributors to the field of entomology.

The many infectious diseases such as influenza, cholera, gonorrhea and the bubonic plague which ravaged the Old World were nowhere to be found in the Americas. In fact, we know about the Amerindian's sophisticated medicinal use of plants from the writings of such scholars as Merian. Merian was given a slave helper for her research and interacted with the Amerindian and African slaves in the colony, who assisted her in documenting the unknown plants and animals native to the New World. One of the few direct references she made to the indigenous people appears in the text she wrote to accompany her illustration of the Flos Pavonis or Peacock flower (c.1701-1705), from an album of drawings entitled Merian's Drawings of Surinam Insects, in which she writes:

'The Indians who are not treated well by their Dutch masters, use seeds to abort their children, so they will not become slaves like themselves. The black slaves from Guinea and Angola have demanded to be well treated, threatening to refuse to have any children. In fact, they sometimes take their own lives because they are treated so badly, and because they believe they will be born again, free and living in their own land. They told me this themselves.'

These few words written on a page to accompany the Peacock Butterfly speak of resistance, a culture of female agency and deep plant knowledge of a technical kind. The term "voluntary motherhood" was only coined in 1870 by British feminists and the first birth control pills were released in Germany in 1961—over 250 years after Maria Sibylla Merian recorded, without judgment, the choices made by the unwonted people, othered in her day.

With Warm Worlds and Otherwise, Anna has created a futuristic storytelling in which we embody both human and non-human entities. This immersive emprise is an offering in bodily transformation, as well as an offering up of other ways to be. One of the delectable joys of Warm Worlds and Otherwise is that it can be enjoyed as a corrective to the cynicism that pervades much of the postmodern culture. This metamodern environment encourages us to communicate across race, gender and ethnicity—a bit like the Chilling Adventures of Sabrina (2018-). In this TV series men, women and non-humans have equal power. But, written for the female gaze, the men constantly take their clothes off to reveal lightly oiled chests. Despite accusations of sexism, the unabashed "enjoyment" of its female and femme fans has challenged preconceived gender roles. Our narratives tell us that sexual objects are objects that are disposable, but in this series the men, pretty as can be, retain their worth. This fandom can be called "internet neo-sincerity at its best"—and thus does Anna invite her viewer to simply revel in the sensual luxury of her piece.

Central to Warm Worlds and Otherwise is the new media artwork *META* (2019), with a bewitching musical score by Aliyah Hussain. *META* can be understood as a fanfiction, remixing concepts drawn from the writing of theorists Luce Irigaray and Jakob von Uexküll (two philosophers concerned with questions of cultural and biological difference) with imagery inspired by science fiction texts such as Aliette de Bodard's Immersion (2012), Naomi Mitchison's Memoirs of a Spacewoman (1962), and the 1975 collection of short stories by James Tiptree, Jr. from which the project takes its name.

Visually, *META* inspirits the work of Maria Lassnig, as well as Maria Sibylla Merian. The late Maria Lassnig (1919-2014) used painting as a technology to generate deeper understanding of embodied sensation and bodily transformation. In many of her paintings she pairs her own image with animals, frequently with an averted gaze, suggesting an interior, somatic sensing rather than a visual way of grasping the meaning of what she held. Lassnig's focus was very much about the nature of the human body and its anima or psyche—its personhood.

The concept of a person is difficult to define in a way that is universally accepted, since corporations, forests and pre-born humans have all been granted personhood and thus are protected by law. Attributes common to definitions of personhood can include agency, self-awareness, and a notion

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of the past and future. In terms of justice, the question remains as to "the who and what of" sentience, and the duties of the law with regards to the protection of those with natural born rights. Anna expands on the conventional definition of a person beyond the human, to include several hypothetical non-human entities. As personhood theory suggests, it is not just human beings who are persons; anything which is sentient is a person too. What rights do any sentient beings have to extend or retain authority over others?

Maria Lassnig, Mountain Spirit with Weasel, 1996, oil on canvas, Albertina Museum, Vienna, Essl Collection

The virtual environment of *META* is brought to life with Anna's colourful, fluid painterly style. The animation opens with the soft primitivism of an unknown planet, populated with creatures at once familiar and strange. In the near distance a woman, a scientist in her golden years, stands beneath a pink sky painting with sure, leisurely strokes. The viewer – now embodied as her companion – drifts towards her blue-cloaked figure. Cocoon-like structures hang from towering reeds and small exotic creatures emerge and play in a pond where the rainbow water moves like molasses on a hot day. Aliyah's immersive soundscape augments the alien landscape with excited wonder. It is an arcadian scene, it's bucolics interrupted by the sudden appearance of a large red creature – neither wasp, butterfly nor beetle – its baleful nature can be felt rather than heard in haunted threads, hidden in the musical score.

Adult wasps have recently been found to use a particular logic to establish the social structures of their society. Known as transitive inference, this is necessary for using knowledge from their past to determine new abstract situations. This is particularly interesting since wasps, butterflies, ants and bees have juveniles whose dissimilar bodies result in lived experiences much different from their adult selves. They all undergo radical, liquid transmogrification and yet the adults retain the memories of their leaf-fed young. Their souls, their consciousness, in essence remains the same, while their bodies metamorphose. This is a key concept in the metaphysics of Amerindian cosmology.

In the next scene of *META*, when we inhabit the body of the flying non-human, we view the world with an alien perspective and our minds labour to cipher meaning out of the scene unfolding beneath our feet. This interpretation gap, this liminal struggle, is redolent in the lives of those who are Othered. And yet in this second chapter of Anna's animation, the qualia of flight as you navigate the aerial dimension is familiar—this dream memory stored in your tissue is what, in the end, grounds you in the experience of being the alien other. Thus, *META* begins its metaphysical skepticism towards the grand narrative of western culture, by its reverence for the virtual at the expense of the real. Or more correctly, a fundamental questioning of what "the real" constitutes.

By presenting this painterly work within an embodied rather than semantic experience, Anna demands we do our critical thinking as part of a corporeal performance; where language and logic take second place to a somatic, bodily understanding. She thus side-steps the paradox at the heart of postmodern critique – the impossibility of deconstructing modernism without the concepts and methods that modern reason provides – and moves us towards a (meta)modernist speculation.

The classic way of thinking of plants as biological automata has been remade by today's ecologists, in particular the scientists who study roots, chemical signals and the sounds plants make. Trees and plants are starting to be understood as creatures with capacities which move them into the realm of intelligence and personhood. In the rubric of traditions known as European thought, plants are not supposed to have consciousness or be sentient. Even more complex, is the realisation that while their new-found behaviours are extraordinary, they do not map neatly onto what is usually meant in animals as learning, memory, decision-making, and even agency. Trying to define plants' behaviour according to our own narrow conceptions risks obscuring what is unique about their intelligence and what is unique about our own.

In Cannibal Metaphysics (2009) the anthropologist Eduardo Viveiros de Castro writes: 'By always seeing the Same in the Other, by thinking that under the mask of the other it is always just "us" contemplating ourselves, we end up complacently accepting a shortcut and an interest only in what is "of interest to us" - ourselves.'

The seductive beauty of Anna's practice, with its painted, drenching glamour eases a fragile pill down reluctant throats. She dares to speculate on one of the more uncomfortable concepts of our times. Maybe, we are not the same under our skins.

The visioning technique of the Amerindian, which emerged from their botanical sciences and the accompanying performance rituals, sits at the heart of their indigenous worldview. With *META*, Anna grasps the eel-like slipperiness of Amerindian "perspectivism": the ideas in Amerindian ontology concerning the way in which humans, animals and spirits see both themselves and one another, the nature of their being. Bodily Metamorphosis is the Amerindian counterpart to the European theme of spiritual conversion. In the early days of modern colonialism, the European never doubted that the Indians had bodies interchangeable with their own—that came later with the development of "race" theory. Western concern lay in the transformation of the heathen soul through the acceptance of Christian beliefs. The Amerindians in turn never doubted that the Europeans had souls since in their belief system, the immutable soul was found in all things.

The Amerindian was much more interested in what was conveyed or represented by a particular material arrangement or sequence of things such as the fungus-linked roots which generate underground webs, with individuals called Mother Trees at the centre. These linked sylvan communities, exchange information, nutrients and water in a literally pulsing network that includes not only trees, but all the forest's life. The Amerindian "anima", which is contained in everything, forests, rocks and people, can also be thought of as that bodiless artefact of storage—the digital. Such a framework treats the

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idea of the soul not as a mere abstraction, but as a physical quantity with the clout to affect the material or particle world.

Thus, reframing in terms of disembodied information rather than matter and energy becomes an alternative way of expressing the physical properties of the universe, whereby everything is interconnected and related to each other. And thus, the form of the body sculpts the nature of a being.

While the ethnocentrism of the Amerindians was concerned with the shape shifting abilities of the European, European ethnocentrism consisted in doubting that the body of the Amerindian even contained a soul.

We are taught that the past is a period which exists before the present time and that History is the past as it is described in written documents. The ancient Greeks had two words for time: chronos and kairos, but most of us are unfamiliar with the latter. Chronos refers to chronological or sequential time, the bleeding of the past into the future. Kairos signifies a proper or opportune time for action. While chronos is quantitative, kairos has a qualitative, permanent nature. In Onians' 1951 etymological studies of the word, he traces the primary root back to the ancient Greek association with archery and weaving—both practices in which women excelled.

Thus, chronos is the time we can think of as a linear, unstoppable flow, whereas kairos is the time from which history, the telling of past tales is woven. In her critical essay '"More Genereous and More Suspicious"—Feminist SF as a Worldbuilding Practice', Anna describes how feminist science fiction gives us a way to orient ourselves towards a different future:

> 'The question of how to break with dominant narratives, and build a world on different terms, is an enduring concern for feminist practice. [...] SF gives us a language that makes it possible to tell stories that have not happened—laying waste to certain worlds in order to build others from what remains.'

We cannot go backwards through time to change the past, but we can pull on forgotten voices of bygone times to reweave history, like the shuttle which passes through the cottons of the loom. We can forecast into the future to create a different perspective of the now. For the threads of current history were chosen by a very small group, who valued theoria (thinking) and praxis (action) over poiesis (making) without understanding that creation, coming into being, is how new times emerge.

Martin Heidegger (1889–1976) was a German philosopher who refers to poiesis (making) as a 'bringing-forth' (physis as emergence), using this term in its widest sense. He explained poiesis as the blooming of the blossom, the coming-out of a butterfly from a cocoon, the plummeting of a waterfall when the snow begins to melt. The last two analogies underline Heidegger's example of a threshold occasion: a moment of ecstasy when something moves away from its standing as one thing to become another.

History is a blanket of stories we wear around ourselves. It is woven from memories of the past but is often embroidered with the lies and half-truths which fly in the face of all reason. And yet, against this threadbare tapestry we judge and value ourselves. And so, we move to the third futuristic umwelt of Anna's *META*, a fannish homage to 'Immersion'—a short story by SF writer and software engineer Aliette de Bodard, which is set within an alternate history where Indigenous American and pre-communist Chinese cultures are dominant forces.

Seated in a restaurant orbiting in space, my table companions are a red headed man and a powerfully beautiful black woman who gives laser sharp side-eye to the waitress for interrupting the conversation to place a platter of strangely familiar food in front of us. My eyes soak in the stellar views of space, while undulating sounds of the conversation anchor me, from a burbling distance. My gaze scans and records in a study of intellectual subjectivity, enjoying the rich variations of Anna's imagery. With rings on my fingers—I have become another. I look down for the warm chocolate colour of my arms. I can still feel them, but they have been replaced with the green robed arms and olive coloured hands of another woman. I imagine this is what it would feel like to wear the "immersor" of Aliette de Bodard's imagination. An immersor is a piece of wearable technology which allows its owner to transform to a better body according to the pre-prepared script of the privileged class of this space colony: the Galactics. The immersor drapes your body in the socially aspirational norm of the future and nudges you to behave in physically acceptable ways. But if worn for too long, the cost of this performance is the loss of your authentic self—meaning you will no longer know how to be-in-the-world:

> 'You're dressed, already—not on your skin, but outside, where it matters, your avatar sporting blue and black and gold, the stylish clothes of a well-traveled, well-connected woman. For a moment, as you turn away from the mirror, the glass shimmers out of focus; and another woman in a dull silk gown stares back at you: smaller, squatter and in every way diminished—a stranger, a distant memory that has ceased to have any meaning.'

In the introduction to *Being and Time* (1927), Heidegger writes: 'It is said that 'Being' is the most universal and the emptiest of concepts. As such it resists every attempt at definition.' Heidegger attempts to describe the meaning of "being" by considering the question, 'what is common to all entities that makes them entities?' Heidegger uses the German expression *Dasein* to refer to the experience of being that is peculiar to human beings. This, he argues, is a form of being that is aware of the paradox of living in relationship with other humans, while ultimately being alone with oneself. Pulling from rational theorists such as Plato and Aristotle, Heidegger writes incorrectly:

> 'This means that seeing always discovers colours, and hearing always discovers sounds. Pure knowing is the perception of the simplest determinate ways of Being which entities as such may possess, and it perceives them just by looking at them. This knowing what is "true" in the purest and most primordial sense; that is to say, it merely discovers, and it does so in such a way that it can never cover up. This perception can never cover up; it can never be false.'

Heidegger's ideas, bound by the known science of his times, now seem dated when contextualised against the new cybernetic and informational theories which have appeared to accompany the Digital Revolution. We now know that our minds play tricks with our perceptions and yet as far as Heidegger was concerned:

> 'Being is that which shows itself in the pure perception which belongs to beholding, and only by such seeing does Being get discovered. Primordial and genuine truth lies in pure beholding. This thesis has remained the foundation of western philosophy ever since.'

The privileging of the sense of sight has dogged western philosophers since the days of Aristotle, with the notion that seeing is synonymous with cognizing being further reinforced by the Roman African Saint Augustine of Hippo (354 –430 AD) when, in his *Interpretation of Lust,* he writes: 'For we do not say 'Hear how it glows', or 'Smell' ; but we say of each, 'See' ; we say that all this is seen.'

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In 1802, the German natural historian Lorenz Oken elaborated a typology of race which, born of frustration at the inability of skin colour to serve the purpose, distinguished between races by associating them with specific bodily senses. The white European being the most "insightful" was thus 'eye man', whilst various other peoples were classified as 'ear' (Asian), 'nose' (Native Americans), and 'skin' (African) men. Throughout the eighteenth-century, the senses played an important part in constructing the idea of race. The supposed sensory wisdom of the indigenous Americans, the insensitivity of African skin and the debate around why umami is not simply savoury provide examples of tropes that have important implications for our understanding of the social experience of, and ideas about, the "them" and "us" categorisation of racial difference.

Reading Aliette de Bodard's 'Immersion', I embody both the young Asian protagonist Quy and an older woman called Agnes, a lost character whose sacrifice was to assimilate into a Galactic woman. She has worn the immersor for too long and it now controls every part of her motorcity—how her body moves, how her nose wrinkles in disgust to umami smells, how she performs obsequiousness to the dominant culture of her Galactic husband. As the author herself notes:

> 'As a woman of French and Vietnamese descent who grew up in France, I am intimately familiar with what it means to be the Other. It's a gulf measured in incomprehension gaps and thoughtless, hurtful remarks like the teacher who once asked me "why are you even here?" It's a pretext used to exclude: society doesn't have to make an effort to accommodate Others, because they won't ever be able to interact with "normal" people. It doesn't have to worry about their happiness or even the basic necessities of their lives.'

Returning to Heidegger, it is by now well known that his thinking was influenced by ideas from the East Asian philosophical tradition and that he was well acquainted with the Buber edition of the Zhuangzi. Zhuang Zhou, commonly known as Zhuangzi, was an influential Chinese philosopher who lived around the 4th century BC and was the pivotal figure in Classical Philosophical Daoism. Daoism is a philosophical or religious tradition of Chinese origin which emphasises living in harmony with the Dao. The Dao denotes the principle that is the source, pattern and substance of everything that exists:

> 'Once upon a time, I, Zhuang Zhou, dreamt I was a butterfly, fluttering hither and thither, to all intents and purposes a butterfly. I was conscious only of my happiness as a butterfly, unaware that I was Zhou. Soon I awaked, and there I was, veritably myself again. Now I do not know whether I was then a man dreaming I was a butterfly, or whether I am now a butterfly, dreaming I am a man. Between a man and a butterfly there is necessarily a distinction. The transition is called the transformation of material things.'

The argument here is not to deny that Heidegger produced one of the most influential philosophical ideas of the twentieth century, but the question is whether the provenance of that philosophy is as exclusively Graeco-Teutonic as its author would have us believe. Heidegger wrote that *Being and Time* was made possible by his study of Edmund Husserl's *Logical Investigations* (1900–1901), and it is dedicated to Husserl 'in friendship and admiration.' The conclusion is unavoidable that Heidegger was less than generous in acknowledging how much he learned from the East Asian tradition and this more than anything diminishes Heidegger's significance as a thinker, while putting his achievement into perspective.

Horns made out of large sea shells, rattles made from wood or gourds filled with stones, bone whistles and flutes were used in the Areíto, the musical song/dance of the Amerinidan. The Areítos were first chronicled in writing by Ramón Pane, a missionary who arrived in the new world in 1494. The singing and recitations of epic poems and ancient texts were accompanied by a wide range of handmade instruments and found objects. Oftentimes, instruments were secured to the body so as to respond sonically to the movements of the performer. Pané drew comparisons between these Arawak performances and ceremonies of the Moors. He also observed that the areíto served as a mnemonic device for societal rules and traditions. These dance/songs were accompanied by precise and complex choreography and led by a 'dance-master' who could be either male or female. They were performed by large groups of people, and there was often a call and response of sound and movement between the leader and the group.

The body in motion, virtual or real is always in a state of transformation. *META* is itself a prop for this embodied experience. Throughout the virtual narrative, we inhabit native bodies, both human and non-human and, moving through worlds of difference, we explore the different perspectives of the Other. The ambient soundscape, built by Aliyah Hussain from handmade instruments and found objects, permeate from the headset into the gallery space, blurring our experience between the physical and virtual environments. The music slowly spirals, as if caught in a cave or a container made of wet, hard mahogany. Rhythmic waves with a hollow core, are breached with notes of deep horn, created as if by the blowhole of an ocean creature made of amber coated baleen.

Thus, in *Warm Worlds and Otherwise*, music becomes a technology which shapes the emotions of our inner selves, VR becomes a visioning technology, and paint becomes a communication technology.

In her exploration of these sensory technologies, Anna finds a guide in Maria Lassnig—an artist who turned to her own body as both the starting point and subject for her paintings and drawings by burying herself into her theory of 'body awareness'.

Maria Sibylla Merian, I Flos Pavonis or Peacock flower with example of grey and orange moth c.1701-1705

Maria Lassnig took an intellectual stance that rejected the possibility of reliable knowledge, and denied the existence of a universal, stable reality. This can perhaps be described as her reaction against scientific attempts to explain reality with objective certainty and her recognition that reality is constructed as the mind tries to understand its own personal circumstances. Within this schematic, Lassnig presented aesthetics and beauty as arbitrary and subjective:

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‘I searched for a reality that was more fully in my possession that the exterior world, and I found it waiting for me in the body house in which I dwell, the realest and clearest reality.’

Such are the ideas found in Anna’s *Warm Worlds and Otherwise,* which suggest the possibility of a redefinition of the classical categories of “nature”, “culture” and “supernatural” based on the concept of perspective or point of view. One could argue that the difference between the ethnocentric evaluation of other cultures according to the customs of one’s own culture, which for the European thinker would deny positive attributes of humanity to others, versus the Amerindian who would extend such qualities to others can be resolved if one considers the linkage between the conscious and corporal aspects of being.

In immersive VR, a small part of the brain holds the memory that you have stepped into a virtual, artificial realm. But sometimes when that memory slips your consciousness, tethered to your physical self, cleaves. Then, you exist simultaneously in two realities, as two selves: both your own self-creation and another self, created by the mind of someone else. For a few precious moments we can just be—different.

As new media technologies such as AR, VR and Mixed Reality approach the visioning technologies of other cultures, it may be best to be careful with comparisons between the two. Just as culture defines technology development, so has technology shaped cultures through the ages and, as current digital culture emerged from the World War II laboratories of the first cyberneticist, Norbert Weiner, we should beware of clumsy equivalences.

Perhaps the real power of Anna’s work is that it allows the paused breath at the top of a step forward. It helps us envision many worlds and other ways to be. *META* exists beyond time and space, pulling from the past and the future. Perhaps, with this new technology, Anna Bunting-Branch’s metamodern witchery heralds another paradigm. Something which emerges from the meeting of the old and the new. Worlds.

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Warm Worlds and Otherwise is a project by Anna Bunting-Branch, co-commissioned in collaboration between Derby QUAD, FACT Liverpool, Wysing Arts Centre and The Mechatronic Library.

The project developed from the Worlds Among Us retreat in 2017, which featured contributions from Rebecca Allen, Katriona Beales, Anna Bunting-Branch, Ami Clarke, Sonya Dyer, Candice Jacobs, Wilf Speller, 555-5555, Werkflow and The Mechatronic Library.

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Anna Bunting-Branch is an artist and researcher based in London. Recent solo presentations include Warm Worlds and Otherwise, QUAD, Derby (2020) and Wysing Arts Centre, Cambridge (2018) and The Labours of Barren House, Jerwood Space, London (2017). Other presentations and publications include Soft Bodies, Castlefield Gallery, Manchester (2020); you feel me_, FACT, Liverpool (2019); Fandom as Methodology, Goldsmiths Press (2019); Waking the Witch: Old Ways, New Rites, UK venues (2018-2019); Landscapes of the Future, Helsinki Contemporary (2018); POEKHALI!, Bergen Kunsthall (2018); figure, feels, fantom, Art Licks (2018); Hauntopia/ What If?, The Research Pavilion, Venice (2017); I AM SF, CCA Derry~Londonderry (2017); Witchy Methodologies, ICA, London (2017). Anna is currently undertaking a practice-related PhD at Slade School of Fine Art, UCL, supported by the AHRC London Arts & Humanities Partnership. In 2019 she was awarded an Arts Council England Project Grant. Moving between different practices – including painting, writing and animation – her work explores science fiction as a methodology to re-vision feminist practice and its histories.

Aliyah Hussain's practice approaches themes found within feminist science fiction literature, and her work moves across sound, ceramic sculpture, drawing and collage. With a background in performance and an interest in process and material, her sound works are created with contact mics and sculptural objects, incorporating drawing, gesture, pressure and tension. Based at Islington Mill in Salford, she has worked with experimental music labels Sacred Tapes and Bloxham Tapes to release three EP's of ambient electronic music that were created as soundtracks to accompany FSF short stories and novels. Exhibitions and performances include, HOME, Manchester, Bergen Kunsthall and Cafe Oto, London.

Helen Starr is an Afro-Carib Trinidadian Blixn* who lives between Trinidad and the UK. She has worked in the Arts sector for over 25 years. She founded The Mechatronic Library in 2010, to enable artists to engage with new media tools such as Artificial Intelligence (AI), Virtual reality (VR), Game engines, and 3D printing technologies. Starr's focus is on the wellbeing of local communities. Working with museum curators and education teams, Starr's hope is that cutting edge artworks can provide a glimpse of a future filled with hope.

*Blixn = (Black womxn)

Overleaf: Anna Bunting-Branch, *Warm Worlds and Otherwise—DEEPLINK*, digital print with embedded links to extracts of animation by Anna Bunting-Branch and sound by Aliyah Hussain, 2020.