

Matters of Matter in Contemporary Art

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Research Question

Does the Anthropocene offer an opportunity to shift ontological assumptions about the material world towards a new materialist way of thinking about matter and processes of materialisation and how can contemporary art contribute to this reconceptualization?

Introduction

In the face of significant scientific evidence, the impact of human activity on Earth has become difficult to ignore. The *Anthropocene* is a term coined by Eugene Stoermer and later popularised by Paul Crutzen to describe a new geological epoch signifying the impact of human activity on the Earth system. (Hamilton, 2017, p.10, p.164). “Anthropos” originates in Greek language and refers to humans, while “cene” refers to an epoch in geologic time. The combination of these two words describes the epoch in which humans have altered the functioning of the Earth’s systems, leaving behind a discernible geological layer on the Earth’s crust and triggered the 6th extinction.

The 6th extinction, which is considered the most serious environmental threat to civilisation, is the accelerating mass extinction of wildlife on Earth as a result of human interference, loss of habitat and destruction of ecological systems.

The shift from the Holocene to the Anthropocene in a short geological timeframe, is principally due to the progressive increase in carbon dioxide in the atmosphere. This is mostly attributed to the exploitation and burning of fossil fuels, causing a cascade of disruptions in Earth’s systems. These include the acidification of the oceans, disruption of the nitrogen cycle and large-scale species extinction. (Hamilton, 2017, p. 1-21). Increasingly confronted by the destabilisation of climate, unsustainable methods of production, limited resources and the accumulation of refuse and industrial waste, as well as the exploitation of land and spoiling of pristine natural environment, humans face the fact that the status quo is no longer sustainable. A paradigm shift in thinking and action is needed.

As scientists, theorists, politicians, environmentalists and artists grapple with the challenges presented by the Anthropocene it seems important to examine human agency in this context. Human centred new anthropocentrism and non-human centred new materialism offer diverging theoretical approaches to the Anthropocene. Anthropocentrism is a philosophical and ethical framework which places the human in the most important and central position in the universe. It is based on humanist ideals and represents a belief in human exceptionality and the power of human volition. New Anthropocentrism is an evolved and contemporary form of anthropocentrism, which in the context of the Anthropocene, elevates human agency into a role of greater responsibility, political, legislative and physical control over environmental and ecological matters. This includes human control over “nature” and non-human entities. Fundamental to this approach is a sense of sovereignty over nature, other species and matter as well as the unique responsibility, which comes with this power to protect the Earth and use agency responsibly.

In contrast, new materialism elevates the shared materiality of all things and decentralises the human by emphasising the vitality of matter and other beings, a capacity previously presumed to belong only to humans. New materialism amplifies the notion of the shared multispecies and material ecologies. Humans are considered part of a larger ecological assemblage of other species and matter. According to the new materialists human agency needs to be decentralised, and a more humble and integrated approach taken.

The notion of human agency is central to this discussion. How we interact with nature is a matter of political policy, legislation, culture, philosophical alignment and personal choice. Arguably the overestimation of human agency and power, combined with humanist and enlightenment ideals have resulted in the Anthropocene dilemma.

This dissertation will briefly examine the concept of the Anthropocene and human agency in the context of the Anthropocene. The role of contemporary art in this discourse is examined and the work of two contemporary artists, Terike Haapoja and Siobhan McDonald, who align with notions of new materialism is discussed. Both of these artists straddle the space between art and science, nature and culture, humans and non-humans in their work and demonstrate an approach, which links art, human agency and the Anthropocene in a critical and questioning way.

Two diverging theoretical approaches will then be compared and considered: Anthropocentrism and new materialism (under the broader umbrella of posthumanism). These two theories were chosen as they are central to the discourse around the Anthropocene. New Anthropocentrism is a common approach in environmental politics originating in philosophy and ethics, while new materialism/posthumanism finds its roots in contemporary theory and philosophy and challenges the overestimation and power of humans. With much discourse around breaking down

boundaries and binaries and acknowledging the enormous complexity of the Earth system, rather than breaking environmental challenges into individual components, it stands to reason that we start breaking down divisions between politics and theory, art and science and nature and culture. Complex systems theory and social-ecological systems (SES) are helpful frameworks, which enable a better understanding of the complex, interconnected and dynamic environmental challenges facing humanity in the Anthropocene. (Benson, 2019).

Considering anthropocentric and new materialist approaches, reconsidering personal belief and value systems is vital, if we are to shift our orientation to the material world towards a new materialist approach. This shift seems essential in addressing ecological issues with both thought and action, if we are to avoid building further on the unsustainable, dualist approach offered by Anthropocentrism.

Artists such as Terike Haapoja and Siobhan McDonald contribute to this discourse in a visual and questioning way, engaging with new materialist thinking and methodology and opening the door to visual cognition and contemplation of an otherwise theory and language-based discourse.

Matters of Matter

The Anthropocene has called into question western humanist ideals and sparked alternative philosophical approaches to the problems facing humanity today. Rosi Braidotti is a philosopher who has contributed important work in the field of posthuman critical theory. She points out an interesting paradox: “All this discourse about the human is happening on the brink of extinction, because we have an Anthropocene problem...” (Braidotti, 2017, 34:22).

The term Anthropocene is both useful and problematic. It is useful because it describes a complex scenario and set of conditions imposed on the Earth's systems by human agency. It is problematic because it reinforces the persistent binary which separates humans from nature as a distinct entity. This ontological belief set does not integrate humans into a complex and dynamic Earth system and thus maintains a human-centred approach, which retains the narrow and anthropocentric way in which environmental challenges are conceptualised. (Benson, 2019).

Geographer Melinda Harm Benson argues that the Anthropocene is an opportunity to consider a new materialist approach to the Anthropocene, which is a move away from the centrality of the human towards a more complex and relational perspective. (Benson, 2019).

The Anthropocene has become an all-encompassing term for a multitude of issues which are much wider than the scope of Science alone and have extended into the social sciences and humanities. Ecosystem scientist Yadvinder Malhi points out: “Beyond the various scientific usages, the Anthropocene has spilled out of its Earth System Science origins and has been adopted as a contemporary environmental and cultural icon”(Malhi, 2017)

The fact that the term Anthropocene is used so widely used means that it also engages a wider audience than just an academic one. Academic journal articles are predominantly read by other academics. Academic writing requires significant education and the motivation to unpack often dense, difficult and abstract theory. To quote Rene ten Bos: “We publish in journals nobody reads. It is the great paradox of publication. The only publications that matter are the ones nobody reads and the publications that people do read are of no interest.” (Bos, 2018, p.2) In other words, the usefulness of research depends on whether or not it is taken up. So, how can all people engage with the problems of the Anthropocene?

The spill-over into arts, humanities and social sciences results in the Anthropocene being confronted on a variety of platforms including the arts.

Contemporary art is a powerful means of eliciting a response from an audience engaging with theoretical notions such as the Anthropocene without the formality and exclusivity of scientific language. Painting, sculpture, installation and video art prompt questions around human agency and the environment as well as eliciting an intuitive/emotional response. The taking of a new materialist approach by artists offers a reconfigured relationship to objects and materials, with the power to shift our understanding of the socio-political agencies of things.

“It can help us interpret the ineffable, especially when words fail to capture the magnificence of the landscape, or the monumental scale of its destruction.”(Roth, 2019, p.11). Contemporary art is a means to ask questions, confront or engage an audience. It is an open and inclusive platform, which can straddle binaries such as nature/culture and humanness/non-human and build bridges by connecting art and science, as well as overcoming language barriers. Art acknowledges the unknown or unknowable and accesses an audience’s intuitive, emotional response to the state of the environment. Contemporary art is an important alternative pathway to considering the fate of the Earth and the epoch of the Anthropocene. While it is intrinsically anthropocentric and a representation of human ontology made for other humans, art can be created with methods, concepts and ideas that are inclusive and acknowledge the interconnected vitality of all matter.

New materialism offers such words and conceptualisations as *vibrant matter*, *thing power*, *assemblage*, *intraconnectivity* and *transcorporeality*, which lend themselves to the creative process. When approaching conceptual concerns artists have such options as using visual metaphors or imaginative comparisons to explore ideas in a poetic way.

Two contemporary artists who engage with the climate crisis and who employ notions of new materialism are Siobhan McDonald and Terike Haapoja. Siobhan McDonald is the artist in residence at Trinity College in Dublin and the School of Biological and Environmental Science at UCD. She is interested in the interface of science and art. Frequently positioned in the space between evidence, scientific fact and the poetic and unknown, her work centres around themes of the Anthropocene and the climate crisis.

“She operates like a scientist, a curious researcher, a theoriser, an explorer. Her art is driven by a process of making interconnected investigations into how the world works. She sees archaeological, botanical, historical, and other records and archives as portals into the past, which might teach us something about the now, and perhaps the future.”
(Leach, 2019)

A dedicated environmentalist, she retrieves mystery, romance and the melancholic in a changing world. While she does not directly quote new materialism or the Anthropocene, her work is very much about the environment, ecology and Earth systems and how we as humans fit into these assemblages. McDonald’s practice naturally finds interconnectedness everywhere – particularly when looking at human interventions in nature and the consequences of these interventions. When viewed through the lens of feminist theorist Karen Barad’s notion of *Intra-action* (see p. 34), the viewer can witness materials combined with natural processes, human interference and time, resulting in a re-configuration of matter into new assemblages. This can be interpreted as a conceptualised, visual representation of a co-produced outcome of material intra-action. Barad’s background in particle physics and quantum field theory has led her to replace the notion of *interaction* with *intra-action*. Intra-action implies an inseparable intermingling of material agency that is dynamic and emergent. It denies the notion of separate objects interacting and allows for a far more complex understanding of such agency.

Much of McDonald’s work engages with the mapping of time, and the effect of the passage of time on matter. Temporality and entanglement of matter with processes, such as the changing states of carbon, erosion, melting, effects of heat, and the movement of ice and tectonic plates are recurrent in her work. Physical forces, time, weather, geology and human interference play a role and are entangled in assemblages of many combinations. McDonald shifts the time scale from small-scale human perception of time to a large-scale sense of geological time. The

repetition and recurrence of events, combined with the juxtaposition of different time scales, allow her audience to reinterpret what they are witnessing and to form a new context.

“McDonald asks questions knowing that there may be no answers, and scientific research often yields more questions than conclusions.”(Mulrennan, 2019)

Being suspended in a place of partial knowledge is familiar ground for science, art and new materialism. However, in an anthropocentric world view, where the agency of matter is largely unrecognised and the unknowable emergent properties of assemblages are not acknowledged, this can be a confronting concept. The concept of the assemblage or constellation was originally a Deleuzian term. It introduces an increased complexity by adding interconnected systems of materials to thing power. Matter in these constellations affects other matter by attracting and rejecting each other, thereby creating new assemblages or causing the dissipation of old ones. Every *thing* affects other *things* and every assemblage affects another assemblage. When the dimension of time and compounding processes are added, everything becomes an extremely complex web, in which we as humans are inextricably entangled.

In an acknowledgement of this complexity and the limitations of scientific knowledge, McDonald suggests that we can simultaneously know and not know.

“Crystalline: Disappearing Worlds, and the fragile landscape of the Arctic Circle” is a body of work relating to the melting glaciers of the Arctic. This multidimensional exhibition includes paintings, sculptures and installations. McDonald followed in the footsteps of Benjamin Franklin’s expedition in 1925 to find the North-West Passage through the Arctic archipelago. She joined a scientific Tall Ship expedition to retrace his steps and witness the effects of the Anthropocene on the Arctic. From this contemporary platform she was able to observe, record and gain a sense of the vanishing Arctic, which informs her work. The immediacy and presence in the environment give an authentic rawness to her work.

She is fascinated by the vanishing of the explorers and the traces they left behind. Like the ice itself, explorers have all but disappeared. Only artefacts and old photographs have survived, allowing a small glimpse into their existence. McDonald was able to borrow these from various museums and used them as a basis for her paintings. Photographic plates deteriorate over time and due to exposure to the elements they retain only a partial sense of what was once there. In her paintings she uses a process of putting many layers of paint down and intermittently scraping this back to reveal what lies underneath. Her process mimics the layers found in geology and the weathering which occurs over time and with human interference. She transports the viewer forwards and backwards in time by revealing what impressions are left behind in the layers underneath, and what is covered up in the present.

Figure 1



The trees are murmuring to each other

Note: Siobhan McDonald, 2016, oil on board, 250x240mm. Copyright Siobhan McDonald

Figure 2



Unknown landscape

Note: Siobhan McDonald, 2016, oil on board, 150x90mm. Copyright Siobhan McDonald

McDonald collapses the nature/culture divide in a paradoxical collision of art and science. Her work produces a strategic confusion of culture, nature and time, which demands to be considered.

Terike Haapoja is a Finnish artist, academic and educator. She investigates the existential and political boundaries of our world with a specific focus on interspecies relations, the human/nature relationship and the rights of nature. She points out that in a western anthropocentric view other species and things do not have a voice. They do not share our language and have no legal/legislative representation or rights and are therefore at the mercy and whim of humans. A vertical political and legislative hierarchy with humans at the top enforces the culture/nature binary and separates us from other species. This specism implies our sovereignty and right to exploitation of nature, matter and other species. Haapoja challenges the political community by questioning who should be included. Her challenge aligns with the new materialist concern for the problematic lack of acknowledgement of *thing power* (Bennett), as well as notions of *inter/intraconnectivity* (Barad) and *transcorporeality* (Alaimo).

Environmental theorist Stacy Alaimo explains: "Transcorporeality entails a radical rethinking of the physical environment and human bodily existence by attending to the transfers across those categories." (Asberg and Braidotti, 2018, p.49). Her theory of permeability points out that the human body is made of matter and is porous. Fluids and matter are exchanged and form complex assemblages. The permeability of matter in the environment levels the playing field with other matter and non-humans, dismissing any binary and pointing out the inter- and intra-action between humans, non-humans and matter.

Alaimo makes an interesting point when she states that language, as the methodology of theorists, offers no way for the non-human/material world to intra-act or have an effect. Haapoja offers an alternative methodology of revealing the dynamic and interactive assemblages of matter. Through her video installation *Community* Haapoja is directing her audience to the relational nature of matter in a dissolving animal, suggestive of the complex nature of a larger ecology.

We have excluded the non-human realm and Haapoja asks: "What would a community without exclusions look like" (Time, 2016, 8:40)?

Haapoja proposes a radical reconfiguration of our relationship to nature. She points out that we are deeply entangled in our interdependence with other species and nature. In an anthropocentric world we have rejected our animality and, with it, our interspecies commonality. Haapoja does not distinguish between humans and animals. In her view, we are all animals, who share an existence and bodies. Our animality and otherness is acknowledged and embraced. We are beings made of things and can be broken down into things. She asks: "What happens

to democracy if we are forced to recognise the agency of other forms of life” (Time, 2016, :38)? Why should the notion of rights only apply to humans (in fact only to some humans)? Haapoja has radical, deep ecological views and challenges her audience to consider and reflect the alternative fiction of a world, where *more than humans* hold agency.

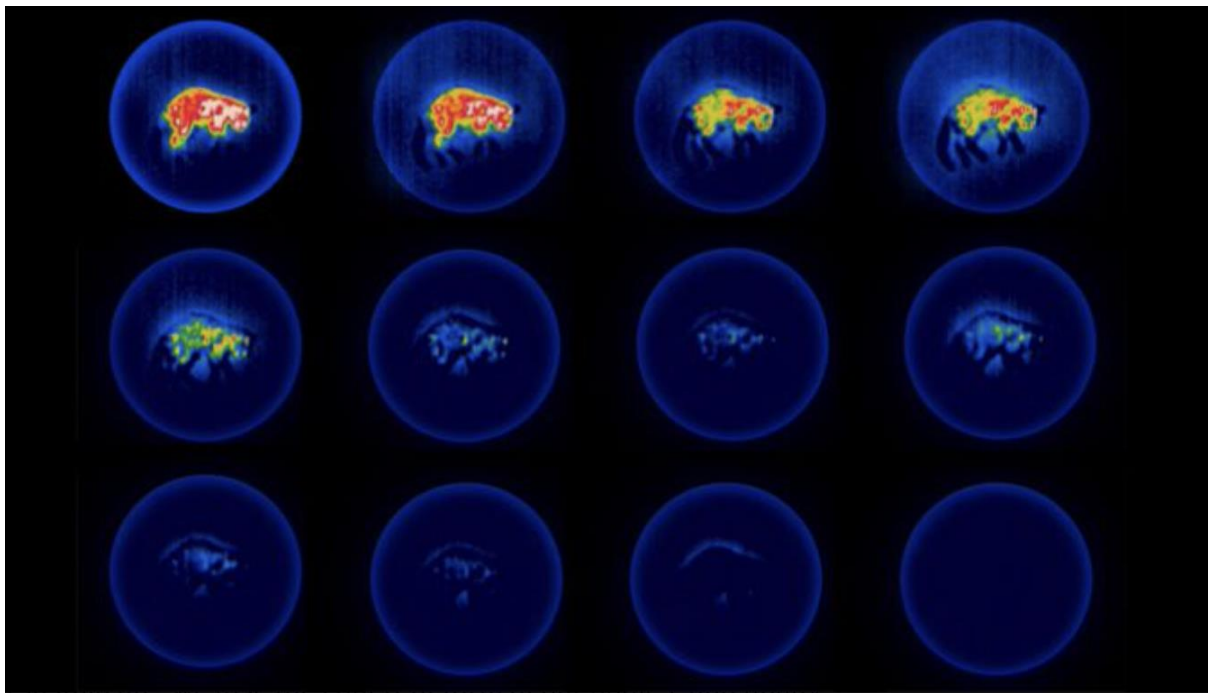
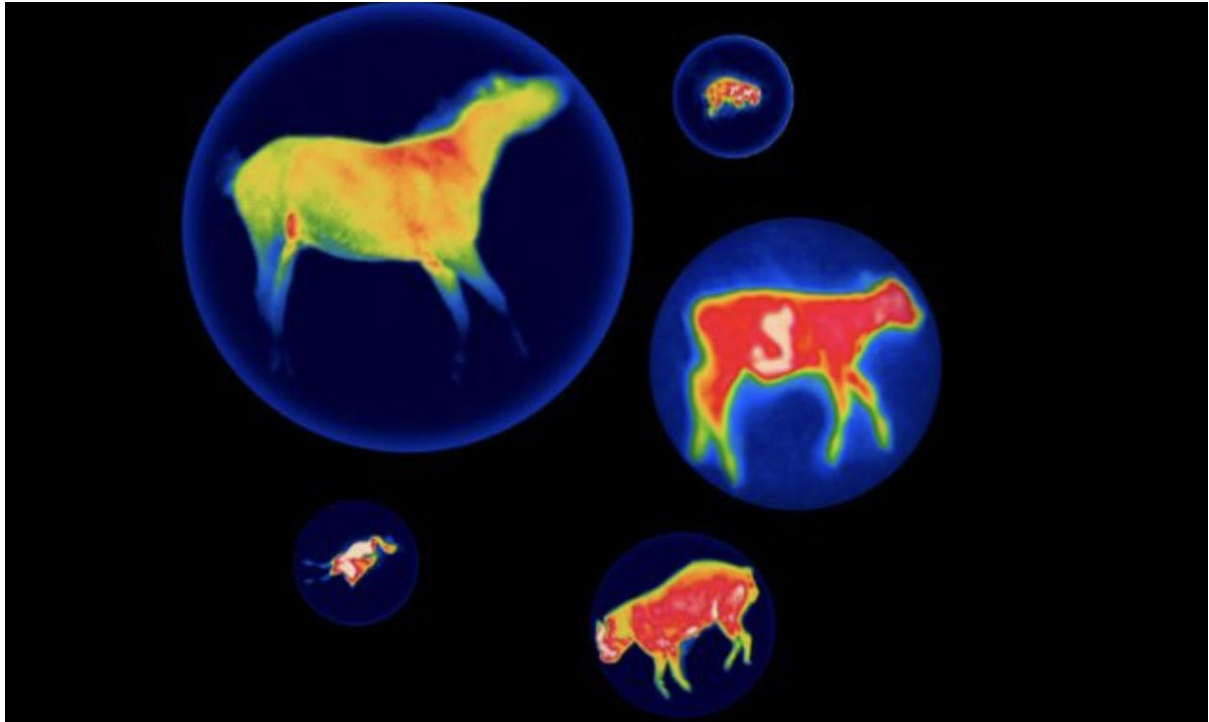
“The goal is not to achieve mastery but to allow us to exist in interdependency.”

(Time, 2016, 36:00). Haapoja’s views align with the notions of new materiality and shift them into an ecopolitical/legal-rights realm.

Haapoja’s *Community* (2007) is a multichannel video installation, for which Haapoja was selected for the 2013 Venice Biennale (Nordic Pavilion).

Figure 3

Community



Note: Artist Terike Haapoja, 2007. Video installation. Copyright Terike Haapoja

“Reflected on horizontal, round projection surfaces, we see a recently deceased animal - a horse, a cat, a calf, a dog, a bird - recorded with an infrared camera. The images show the inevitable in the colours etched on the corpses of the animals: colourful life fades into its deep blue background. We witness how islands of matter that were alive only a moment ago dissolve into a sea of entropy. What kind of community is this? Are we its members? And how does it define its limits” (Mousse magazine, 2013, p.2,3)? Haapoja appears to conceptualise Stacey

Alaimo's notion of transcorporeality (see p. 34). We are able to witness *dwelling in the dissolve* in action. Components of a once living, porous creature reconfigure into new assemblages of matter. The passing of time becomes an important factor in highlighting the constantly changing nature of ecological systems, where humans, non-humans and matter are inextricably enmeshed. The soundtrack of a continuous exhale accompanies the work, emphasising the sense of temporality and raising awareness of non-human animal deaths at a time of the 6th Extinction and the climate collapse. This installation is confronting, the viewer is not protected from the reality of animal deaths or our relationship with other species and matter. Ethics of human behaviour in the time of the Anthropocene are raised in a rather shocking and melancholic way, encouraging her audience to reconsider their orientation to the non-human world and instilling a sense of obligation to protect the nonhuman participants of the ecology.

There is much discussion amongst theorists as to who the Anthropos implicated in the Anthropocene is. As it is an undifferentiated term, it implies that all humans are responsible for the Anthropocene. Yet it is a relatively small percentage of the world population who are responsible for the majority of Earth system disruption. Blame has mostly been directed at the northern hemisphere and directly linked to western consumer society. Unsustainable production, consumption and exploitation in the pursuit of financial gain by a fraction of humanity have led to the Anthropocene.

Jason Moore has pointedly renamed the Anthropocene the Capitalocene (Hamilton, 2017, p. 167). Rather than blaming all humans, he has identified capitalism as the problem and financial gain as the underlying driver for unsustainable practises and located it firmly in western consumer society.

Geographer Kathryn Yusoff examines the racial blindness, which she associates with the term Anthropocene. She believes that the Anthropocene started earlier than estimated by scientists and links it the beginnings to colonialisation, slavery, exploitation of indigenous people from about the sixteenth century. She states:

“If the Anthropocene proclaims a sudden concern with the exposures of environmental harm to white liberal communities, it does so in the wake of histories in which these harms

have been knowingly exported to black and brown communities under the rubric of civilisation, progress, modernisation and capitalism. The Anthropocene might seem to offer a dystopic future that laments the end of the world, but imperialism and ongoing colonialism have been ending worlds as long as they have been in existence.” (Yusoff, 2018, p. XIII)

The term Anthropocene is also problematic to the new materialists as it is, by definition, human-centric and assumes that humans are separate from nature and are central to this proposed epoch. It reinforces the binary of humans and matter, nature and other species and nature and culture, which the new materialists deny. It could be argued that humans are part of nature and a mere blip in geological time. This view would suggest that a term centralising the human is anthropocentric conceit. However, for the purposes of this dissertation the Anthropocene is considered a helpful term in describing a set of complex conditions facing the Earth’s systems, including humans. It allows us to use a single, descriptive term as a context in which we can reconfigure our orientation to the material world and unpack this discourse.

When discussing human orientation to the material world in the context of the climate crisis, it seems important to define which humans, where, how and in which context we are talking about. As pointed out by Braidotti (2017), “human” is NOT a neutral or inclusive term. Who is the Anthropos in the Anthropocene? (3:53)

Historically “the human” was a closed notion, defined by a western patriarchal world view. This defined a specific notion of what it means to be human, where not every human has an equal voice. Many categories of people have struggled to qualify under this world view, which is full of cultural, ethnic, gender, sexual and educational bias.

Historically some humans have been treated as sub-humans, who consequently had little or no voice and do not feature in the historical anthropocentric world view. For example, slavery created a sub-human considered little more than belonging to the animal kingdom, with the power, voice and human mantra belonging to the owner. Similarly, we are excluding some humans based on race, nationality, affluence, sexual orientation, disability, religious affiliation etc. Until we include the “missing people” in this discourse, resolving a cohesive approach to the Anthropocene will remain problematic. (Braidotti, 2017, 48:50). Braidotti believes that by addressing human inequalities and bias we fundamentally shift a belief system. This shift will then affect our orientation to the material world, other species and the ecology.

She defines this as the post-human turn:

“The post human turn is triggered by a convergence of anti-humanism, on one hand, and anti-anthropocentrism on the other. Antihumanism focuses on the critique of the humanist ideal of “Man” as the universal representative of the human, while anti-anthropocentrism criticises species hierarchy and advances ecological justice” (Braidotti, 2017, p. 9).

The convergence she describes is producing a cascade of theoretical, political and social effects and is a qualitative leap in a new conceptual direction. (Braidotti, 2017, 7:59) As a result, the post-humanists believe humans need to radically change how they understand their position among the non-humans and how we express our agency.

When Braidotti states that humans need to radically change, she means humans in western, industrialised cultures. Many indigenous cultures do not see themselves as separate from the natural world. Without the western duality and its resultant claim to sovereignty over other species, ecology and matter, they have little need for new materialism or posthumanism, as it is already part of their culture and belief systems. Manulani Meyer explains the relationship of native Hawaiians to land and nature: “Indigenous people are all about place. Land/aina, defined as “that which feeds”, is the everything to our sense of love, joy, and nourishment. Land is our mother. ...*This is not a metaphor. ...This is an epistemological idea.*” (Critical and indigenous Methodologies, 2008, p. 219).

Similarly, New Zealand Maori believe that “Every person and everything has a Mauri, which binds the physical body and spirit together. As well as a physical body, all things have a spirit that exists beyond life.” This belief system does not differentiate between body and mind or between humans and other things, as all have a spirit. Maori believe that they are part of the land, and the land is part of them. Their role is one of temporary guardianship of the land and all things.

“Kaitiakitanga is guardianship - the word “tiaki” meaning to look after, care for, protect, conserve and save. This concept represents the responsibilities and obligations of the tangata whenua to protect and preserve the gifts of their ancestors for future generations. These gifts may include land, taonga (treasures such as pounamu and traditional cloaks), whakapapa and traditional stories, as well as long-term relationships with other whanau...”(Marae, 2015, p. 46).

Kaitiakitanga by its definition is contrary to the sense of sovereignty imposed on nature and its ecological systems by western industrialised nations.

New Anthropocentrism is an evolved and more contemporary version of the anthropocentric humanist and enlightenment views of the past, which have proven a poor guide to negotiating the Anthropocene.

The ethos of “all rights and power, no responsibility” is implicated as being responsible for the Anthropocene dilemma. In the past, humans have felt that they were entitled to use the ecology to their own benefit but have conveniently neglected the care, responsibility and obligations that need to accompany these privileges. Clive Hamilton, ethics professor and advisor to the Australian government on the environment, advocates what he calls new anthropocentrism. (Hamilton, 2017, p. 36-75). Hamilton has advanced historical anthropocentrism in an attempt to mitigate the effects of man-made change to the Earth system, while persevering in a human centred belief system. New anthropocentrism is a mainstream approach to matters of the Anthropocene in both political and academic circles, which maintains the division between human culture and the natural world. Hamilton acknowledges the complexity and potentially insurmountable difficulty facing humanity with what appears like realistic pessimism. In an economic system that is built on exponential growth and consumption within a finite planet, incentives to do the right thing are scarce, and rely on a steady moral compass as well as the practical and financial ability to act. There seem to be few immediate disincentives for abuse of the Earth system.

A paradigm shift in thinking, consistent across all humanity, irrespective of culture, religion and existing belief systems is needed. Hamilton thinks that this would take many generations, by which time it may be too late. He believes that some answers can be found in politics, legislation, science and a shift towards new anthropocentrism, where rights come with responsibilities and our freedom with obligations. In his view, care needs to supersede the ego and capital. Hamilton suggests we acknowledge that precisely because we have created the Anthropocene and have become the dominant species, we need to approach the future with more humility, care and restraint. However, it seems that what we need to find most is inclination. Hamilton credits humanity with freedom of choice and urges us to consider the options carefully. He further amplifies human exceptionalism by promoting control and mitigation of damage to the environment. Agency lies entirely with humans according to Hamilton, due to their superior consciousness and ability. Yet it would seem that it is this hubristic stance towards environmental challenges that has landed us in the situation we find ourselves in in the first place. It denies to a large extent the complexity of relational systems, as it is based on the human perspective and understanding only.

New materialists would argue that there is no division between humans and non-humans and that this very division is a root cause of the Anthropocene crisis we find ourselves in.

While Hamilton agrees that nothing exists in the Earth system outside of its relationships (Hamilton, 2017, p. 110), and that we are inextricably linked to nature, he does point out that human agency differs from that of inert materials and other species by their volition and intent, as well as the freedom afforded by these. This is a problematic paradox, as Hamilton wants to combine human exceptionalism with our entanglement in the ecology. It would seem that we can't have it both ways.

It is interesting to note that he does not advocate a decentralisation or depowering of the human for the benefit of the wider ecology, instead he amplifies human agency to greater responsibility and care for the Earth. This is what he means when he says, *the problem is not that we are anthropocentric, but that we are not anthropocentric enough.* (Hamilton, 2017, p. 53) New anthropocentric thinking is based in science, politics and ethics, which originates in human thought and perspectives. These complex and often abstract notions are what distinguishes humans from other creatures and matter according to Hamilton. Yet, this belief system is problematic, as it denies the ontology of other species, matter and the rights of nature and instead places humans firmly in control. Hamilton's thinking seems blind to the fact that humans have only been able to affect the Earth system, for better and for worse, in association with other matter, and therefore need to be understood as a component and product of a material world. While Hamilton advocates care, sustainability and responsibility, his theory remains rooted in a belief in human exceptionalism and in the power of humans to change the trajectory of the Anthropocene by altering our course with the use of science, technology and human behaviour. He asks: "What kind of creature interfered with the Earth's functioning and would not desist when the facts became known? Who are we and what is the nature of our responsibility?" (Hamilton, 2017, p. 149). He queries how we might approach this escalating tension between humans and nature, particularly as humans are bound to nature by necessity, but also by a moral code of responsibility. Once again he highlights the binary split between humans and nature and the nonsensical paradox of human control/embeddedness in nature. Hamilton's notion of new anthropocentrism contrasts with the New Materialists, who are interested in pursuing a more integrated approach to the Earth system and would prefer to relinquish power and sovereignty over nature. It is interesting that Hamilton is so dismissive of a collaborative and interconnected material agency, when human intentionality could equally be used to integrate better with the multispecies/material assemblage that is the Earth system. It appears that he is struggling to overcome his liberal humanist schooling and is insisting on keeping the human separate.

The implication of Hamilton's theory is that humans need to "manage" non-humans, matter and some other humans. Despite his good intentions, it is this apparent overestimation of human

power and agency that is fraught, as it assumes that human culture is distinct from the material world and places the human in a position of mastery rather than a product of the material world. Timothy LeCain observes from a new materialist perspective; “Having correctly diagnosed the disease, Hamilton seems oddly unwilling to accept the logical cure: To abandon the modernist worldview altogether and embrace the possibility that all human power, culture and technology are to a significant degree creations of the natural material world.” (LeCain, 2015, p.10)

An alternative approach to the Anthropocene is posthumanism. The posthumanities encompass many satellite theories, including new materialism. A prominent figure of new materialism is political theorist Jane Bennett, whose book “Vibrant Matter” has quickly become an important work, as it transcends and links some of the previous theories around Vitalism and creates the new strand of New Materialism or Vital Materialism. She manages to incorporate, what would seem an extremely complex and difficult task, which is to relate and explain connections between philosophy, politics, ecology, science and the environment. In the most basic terms, new materialism connects all matter - living and inert - into a linked system, where everything is related and affects everything else. Her work is informed by theorists Adorno, DeLanda, Deleuze, Spinoza, Nietzsche, Thoreau and Darwin among others.

Hamilton criticises Bennett’s theory of new materialism: “She sets out to distribute human agency around nature, dissolving human intentionality in a soup of natural forces and objects. And so, an actant never really acts alone. Its efficacy or agency always depends on the collaboration, cooperation, or interactive interference of many bodies and forces. Humans are deprived of their uniqueness.” (Hamilton, 2017, p. 91)

This exceptionalism and anthropocentrism is precisely what Bennett finds problematic. She argues that agency is shared and not unique to humans.

Bennett believes that, if we are to engage with climate change, it is important to consider the notion of agency. In general agency refers to an action or intervention with a particular outcome. New materialism affords agency to humans, non-humans and matter. It elevates the shared materiality of all things, and therefore decentralises the position of the Anthropos.

Jane Bennett suggests that all matter is lively. This potential she calls conatus. Conatus is an entity’s potential and momentum to reinforce and enhance itself. This also functions in larger assemblages of matter, other creatures and humans. Connections are active and each component in this material network has the vitality and the power or agency to act on other matter. She describes these connections as the vibrant life of inert matter. Rather than an anthropomorphism or a theological spirit or an animism, she defines this vitality as interacting

material agencies or vibrant matter.

Bennett introduces the idea of thing power and rejects the concept of an object, which is passive, known and silent. Instead, things and thing power are introduced, the nature of which is not entirely knowable and affords matter a potential and vitality. "The concept of *thing power* offers an alternative to the *object*, as a way of encountering the non-human world." (Bennett, 2010, p.XVII) As all matter is lively and connected, it follows that Bennett rejects classic vitalism with its western dualistic split between objects and subjects, as well as life and matter.

"I ask why this divide has been so persistent and defended so militantly, especially as developments in the natural sciences and in bioengineering have rendered the line between organic and inorganic, life and matter, increasingly problematic." (Bennett, 2010)

Consequently, she challenges the concept of a traditional western hierarchy, which places humans on top. She asks us to consider a horizontal structure, where matter has its own intentionality and agency. She believes that it should be placed alongside, not below human agency. Bennett explains:

"Why advocate the vitality of matter? Because my hunch is that dead or thoroughly instrumentalised matter feeds human hubris and our Earth-destroying phantasies of conquest and consumption. It does so by preventing us from detecting a fuller range of non-human powers circulating around and within human bodies.... The figure of an intrinsically inanimate matter may be one of the impediments to the emergence of ecological and materially sustainable modes of production and consumption." (Bennett, 2010, p.IX)

This seems like a hugely important statement, where we are asked to consider our orientation to the material world and make some choices. If we separate ourselves from nature, it disembodies us in a way that allows us to exert power and control from the safe distance of a "bunker mentality", running the risk of exploiting nature by an abstracted and disconnected humanity. Should we acknowledge interacting material agencies, then we dwell amongst matter. To exploit it under those circumstances would be to disrupt an ecology, which we are deeply enmeshed in. It therefore follows that a humble, careful and integrated approach to all matter may be a more helpful when approaching issues around the Anthropocene. Bennett credits the conative nature of all things to form associations with other things, giving rise to assemblages. "There was never a time when human agency was anything other than an interfolding network of humanity and non-humanity; today this mingling has become harder to ignore" (Bennett, 2010,p.31)

New materialism includes other theories which overlap and intersect with each other, collectively re-thinking political agency and subjectivity beyond anthropocentrism. Contemporary philosopher and new materialist Karen Barad is known for her theory on agential realism. According to Karen Barad's concept of *Intra-action*, agency is not possessed by individual things or beings, but emerges through its intra-connected relationships to other things and beings (Verlie 2002, p. 1). In simple terms, the "cause and effect" of bringing two *things* together, resulting in a new *thing* or assemblage. In applying Barad's concept of *intra-action*, Verlie questions if climate change is in fact ... "a co-produced outcome of the "*intra-action*" between carbon and humans." (Verlie 2002, p. 2). Implications of *Intra-action* confirm the need for acknowledging complex and dynamic systems, where potentially infinite variations of intra-acting matter is possible.

Similarly breaking down boundaries between humans and matter with her notion of transcorporeality is Stacy Alaimo. On an overlapping trajectory to Barad, Alaimo does not differentiate between notions of bodily permeability and the permeability of matter in the environment. She believes that we are "dwelling in the dissolve", a soup of entities, immersed and enmeshed in multispecies material agencies and liveliness. Where Barad acknowledges the intra-actions of all matter to form new matter, Alaimo points at the permeable, dynamic and constantly changing soup that is made up of all matter including humans.

In a reconsideration of our orientation to the material world and in application of new materialism, *intra-action* and transcorporeality to socio-politics, theorists Diana Coole and Samantha Frost suggest:

"In the light of the 'massive materiality' that makes us up in our embodied condition as human animals-embedded in webs of dependencies and relations with myriad of other species and forms of 'matter', produced and reproduced by social and economic structures that shape our everyday existences, how could we be anything other than *materialists*?"

The new materialist turn has been given added impetus by the development of controversial political issues which involve the politics of matter- such as climate change or applications of biotechnology. We see this broadening out of concern with the material as a positive move towards more inclusive and less parochial social science." (Cudworth, 2015)

In considering notions of assemblages, transcorporeality and *intra-action*, we have an ever-changing, evolving ecology which we have no way of knowing completely or accurately predicting due to its complexity and the limitations of human cognition. In a practical example

Bennett describes the scenario in which we throw away rubbish and that rubbish disappears to the dump and from our minds. Rather than vanishing, however, it not only continues to exist, but has the conatus to form new constellations and to have a more complex effect on the environment. This effect could be relatively benign, or result in leaching a toxic soup into the surrounding environment, affecting the wider ecology and all the assemblages within.

The political implications of this, according to Bennett, are mostly a sense of integration of all matter, human and non-human, care, respect and treading lightly in our environment. We need to accept evolving processes, chance, flux and the inevitable unknowable. Control over the unknowable should be relinquished and thing power and assemblages acknowledged within the political ecology of vibrant matter.

Bennett challenges the hierarchy of contemporary political constructions. She argues that placing humans at the top of a hierarchy affords them sovereignty over other species and matter. As a result, she advocates a more horizontal structure. Her aspiration, she writes, “is to articulate a vibrant materiality that runs alongside and inside humans to see how analysis of political events might change, if we gave the force of things more due.” (Bennett, 2010, p. viii) To place ourselves at the top of a political hierarchy is to isolate ourselves from nature. We have to ask ourselves if that is what we want, or whether we prefer to live in close proximity.

Contemporary politics tend to compartmentalise and overly simplify many issues by denying the unique systems of interlinked matter in all its configurations. Political issues, addressed in isolation, run the risk of allowing individual agendas to thrive, without due diligence being given to a more complex and inclusive perspective. Consequently, it lends itself to a self-serving and convenient approach to politics and materialistic success, making it a disincentive to change governance and political approaches. As a result, we hang onto an outdated and dysfunctional approach which is no longer defensible.

A hierarchical structure raises further ethical questions such as: What about the rights of nature, other species and matter? How are these considered and defended? Due to the incredible complexity of the assemblages that make up the Earth system and the fact that it is continually evolving, Bennett concludes that we cannot completely know its nature and configuration. Accepting this human limitation has important implications when we are considering interfering in an assemblage or ecological system. In fact, interfering with any *thing* will have an effect that is not entirely knowable or predictable. This comes with implied risk and has the potential to cause further change in a landslide of causality. It is not surprising then, that “fixing” the climate

crisis or 6th extinction by means of further human interference, such as geoengineering, seem fraught and tinged with hubris, however well intended.

Bennett challenges us:

“Admit that humans have crawled or secreted themselves into every corner of the environment; admit that the environment is actually inside human bodies and minds, and then proceed politically, technologically, scientifically, in everyday life, with careful forbearance, as you might with unruly relatives to whom you are inextricably bound and with whom you will engage over a lifetime, like it or not. Give up the futile attempt to disentangle the human from non-human. Seek instead to engage more civilly, strategically, and subtly with the non-humans in the assemblages in which you, too participate.” (Bennett, 2010, p. 116)

Bennett engages with this concept in a contemporary and political analysis. She asks us to integrate with the environment, to acknowledge that we are the environment, to care for and take responsibility for our relationship with all matter and finally to become the ecosystem.

Conclusion

The new epoch of the Anthropocene confronts humans with their relationship to non-human entities. We are at a crucial turning point in the climate crisis, where changes must be made to avoid further descent into an unknown, unpredictable collapse of the ecosystem.

Both anthropocentrism and new materialism engage with the climate crisis and reconfigure our approach to the Anthropocene. However, philosophically they come from entirely different viewpoints. The essential difference can be reduced down to its power structure of these two theoretical approaches. New anthropocentrism is seeking increased human power and agency by way of a vertical power structure with selected humans at the top, working with science, technology, politics and legislation to improve environmental matters. New materialism seeks to level the power structure to an open, horizontal one, which incorporates the rights of nature and other species. It acknowledges the agency and vitality of matter. Distinctions between subject and object, humans and other species, nature and culture are collapsed, and the human is placed among the non-humans in a complex assemblage.

At a time of climate crisis and techno-industrial hubris, it does not seem wise to trust in further empowering the Anthropos, as this optimistic view is based on the essential soundness of our current relationship with the material world, and this does not reconcile with the position we find ourselves in. However, decentralising the human, redefining who that is and how we can fit into

the Earth system as part of a larger assemblage, defending other species and matter, acknowledging the unknowable and taking a pause before we rush headfirst into progress seems like a wiser approach.

In this context contemporary art presents an opportunity to encounter materiality in the process. It is an inter and intra-action of matter and artist, forming an assemblage that has its own agency. Art is an alternative way of receiving and processing written or spoken information. It is a personal response to notions of the Anthropocene by the artist and is received in a personal response by the viewer. The inception of ideas, as if they were the viewer's own, can be more imperative and actionable than an idea forced on a person explicitly.

It is this encounter, which has the ability to ask questions and produce a reaction, that make it a powerful means to interact with matters of the Anthropocene.

“Art can emotionalise, touch our innermost feelings and cast a critical eye. It allows us to shift perspective. It can remind us of the natural foundations of our cultural reality, of the finite nature of resources, of human endeavours whose impacts are no longer under control” (Roth, 2019, p.11). The artist has the opportunity to connect with matter and to witness it becoming lively and vibrant in its own agency. Art becomes an exploration of the nature of matter and the transformation of materials from one state to another.

While art is the interpretation of human experience of the non-human world, placing it in a human-centric realm, it is in the representation of the beauty of nature, as well as its destruction, that we are forced to question our place in it and our orientation to it. Making art at the time of the climate crisis is very much grappling with what our relationship to nature is and how nature and culture are intertwined. It is not until we elevate the shared materiality of all things that we will be more reconciled in our orientation to nature and the material world.

(7834 words, excluding references)

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