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How to Change the World(ing): Blurring Boundaries of Agency towards a Posthuman Future

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Introduction

Indecisiveness was my thing. I had extreme difficulty in making decisions, even choosing what to eat in a restaurant was a nightmare. A boogie man with the superpower of anxiety was always waiting in the corner for a new decision to come up. It used to whisper to me: It's all in your hands, your decision has the power to move between possibilities, you can control life and everything inside it, you are the mighty agent of this world; therefore you must decide well. I believed in this story. I was on the driver's seat of my life, weren't everyone? Were they? Free to choose whichever I want with my mind, independent from and superior to my surroundings, I was the *human* of neo-liberal modern Western society, the hero in my universe. My boogiemán hasn't invented the story though, it was born into it. The modern Western culture was built on the story of the *human agent*.

The reason why I use the past tense is that through my practice, I chose to let go of control over things in art-making, and through this research, I realized that I have never actually got the control over life, just as you don't either. And my life is not only my life, as yours isn't only yours. Our lives are intertwined in a relationality exceeding the boundaries of humanism. Posthumanism is a multidisciplinary research field for designing new perspectives on the world, where 'human' is not central to the existence with a privilege to use, control and exploit other beings, by rejecting the anthropocentric views of causality and agency. The understanding of these terms has been shifting from humanism to posthumanism in academia since the 80s. Yet, as we shall see, this shift has long been happening in the art scene, starting from modern art.

My purpose with this study is to explore if and how contemporary new media art can entail a change towards a posthuman world. To see if art can change the world, I first analysed the shift of the notion of agency from humanism to posthumanism and how it resonated itself in arts, prior to academia. Then, I intended to theorize a framework for thinking about new media art, specifically AI(Artificial Intelligence) art, which can hopefully give rise to the new understanding of a more-than-human agential world that posthumanism has been building. I will undertake a case study to demonstrate my theory as well as to test its validity on a contemporary work which is Mosaic Virus, by Anna Ridler, a new media artwork that integrates emergent technologies of the 21st century.

Blurring Boundaries of Agency Over Life

Story of The Human Agent

The obsession of making the right decision is highly related to how we perceive time, especially the future. Once upon a time, the future was a fixed series of events to predict or something to pray for, to ask from God(s). Astrology or geomantic machines was the thought to be ways of seeing into future (see Figure 1). Yet, after all, how did we start to believe the future is shaped by human decisions and actions? It began with a story that has conquered the Western European society over 400 years ago, claiming that the *human* must control life and matter, for the simple reason that it can.



Figure 1: Muhammad ibn Khutlukh al-Mawsili, *Geomantic Instrument or Divination Machine*, 1241-1242

The story of the rational, intentional, sovereign human agent originated in Renaissance. Humanism, as the major intellectual movement of the Renaissance and the dominant school of thought from the 15th century, defined a particular type of 'human' and emphasised *his* value and agency over other beings¹. The intellectuals of the Renaissance were inspired by the Greek culture. They created the notion of the *human*, based on the idea of *anthropos* in Ancient Greek thought, deriving the name 'hūmānus' from Ancient Latin². The Greek term *anthropos* was a notion built on contradictions. To explain further, it was defined as much by what so that the following categories defined: not non-human animal and not God/Goddess; not Barbarian, or not uneducated

¹ Paul Grendler, "Humanism", *Oxford Bibliographies*, 2017 <<https://www.oxfordbibliographies.com/view/document/obo-9780195399301/obo-9780195399301-0002.xml#obo-9780195399301-0002-div1-0001>> [Accessed 8 July 2020].

² Vito R. Giustiniani, "Homo, Humanus, And The Meanings Of 'Humanism'", *Journal Of The History Of Ideas*, 46.2 (1985), 167-169 <<https://doi.org/10.2307/2709633>>.

while education was only for man³. Following this contradictory attitude, the existence started to be seen as *human* on the one hand, and *non-human* on the other. Therefore, the studies about humans were divided in the academia from studies of nature through the establishment of Humanities, a distinction that persists today.

Descartes' model of subjectivist metaphysics became the base of the humanist story. He defined humans as subjects and everything else as objects. Besides, he declared a passivity of matter that 'material objects are discrete; they move only upon an encounter with an external force or agent, and they do so according to the linear logic of cause and effect.'⁴ The thinking subject, the human of humanism, was ontologically different than the passive matter with a sense of 'mastery'⁵ over it; human beings established themselves in 'a position of dominance' concerning everything there is⁶. Nature was marginalised from human agents to exercise control over.

What Is Humanist Agency?

Agency, in the account of humanism, is defined as the capability and ability of a human subject to act through intention, producing an effect in the world. It is also a sense of control over one's own actions through awareness of initiating and executing volition⁷. Intentionality is related to the ability to think, which is only recognised for the human who has intrinsically self-conscious and rational. Agency in the humanist thinking is also contrasted to objects responding to natural forces, and animals reacting to instincts.⁸

The humanist concept of agency is still accepted in Western societies since the Enlightenment as the capacity of humans to act independently and to make decisions with intentions. By not recognising non-human's agency, humanism implies an authoritarian power of human over non-human.

Why It Needs to Change?

The exclusivity of humanism has damaged the excluded ones and things over centuries due to the notion of the agency which has been recognized only to *human*. The dominance, exploitation, and control of humans over non-humans has resulted in a cultural and environmental collapse.

Iris van der Tuin asks: 'Where is the space for, and place of, the agency of women in a patriarchal system?'⁹ Yet, women have not been the only ones who are deemed to be 'less human' by humanism. Through the heart-rending history of slavery, people of colour were treated as commodities. The false dichotomies like

³ Francesca Ferrando, 5. *What Does POST-ANTHROPOCENTRISM Mean? Dr. Ferrando (NYU) - Course "The Posthuman" Lesson n. 5*, online video recording, YouTube, 7 Dec 2017, <<https://www.youtube.com/watch?v=UNh1r-eOoiQ&list=PLAXeXR1DbC1rvnBtdo2-ol-3V8ePmr7jp&index=5>> [accessed 8 July 2020]

⁴ Diana H Coole and Samantha Frost, *New Materialisms* (Durham [NC]: Duke University Press, 2010), p. 7.

⁵ Diana H Coole and Samantha Frost, *New Materialisms* (Durham [NC]: Duke University Press, 2010), p. 17.

⁶ Martin Heidegger and David Farrell Krell, *Nietzsche*, 4 vols. (San Francisco, Calif. u.a.: Harper & Row, 1982), p. 100.

⁷ Marc Jeannerod, "The Mechanism Of Self-Recognition In Humans", *Behavioural Brain Research*, 142.1-2 (2003), 1-15 <[https://doi.org/10.1016/s0166-4328\(02\)00384-4](https://doi.org/10.1016/s0166-4328(02)00384-4)>.

⁸ George Wilson and Samuel Shpall, "Action", *Stanford Encyclopedia Of Philosophy*, 2020 <<https://plato.stanford.edu/entries/action/>> [Accessed 8 July 2020].

⁹ Iris Van Der Tuin, *Generational Feminism: New Materialist Introduction To A Generative Approach* (London: Lexington Books, 2014), p. 28.

white/black, Western/Eastern, Rich/Poor,. Etc, where one side exercise power over the other, is rooted in Cartesian dualism, which is the very base of the humanist thinking.

On the other hand, nature is not taking the exploitation of humans anymore. Anthropocene¹⁰ is questioning human hubris to its foundations. Anthropogenic global warming and epidemics such as current COVID-19 or previous pathogenic avian flu which is related to human exploitation of animals can be seen as the consequences of the 'the evacuation of agency from nature' which 'underwrites the transformation of the world into a passive repository of resources for human use.'¹¹. According to Heidegger revelation of nature in the mode of ordering is the framework of modern technology¹². Still, I argue that it is, in fact, the framework of humanism, which bestows humans the right to exploit nature. In modern Western societies today, we are still talking about sustainability as if nature is a *standing reserve* for consumption¹³. Objectifying animals as pets or food to buy and sell like property and objectifying lands of the earth as literally property is how some of the agential relations come to matter through humanism.

Accepting the multiplicity and plurality of non-human agencies is an emergency due to the 'staggering transformations we are witnessing'¹⁴ including the rapid adoption of technological developments in our daily lives. Not being able to recognize non-human agency problematizes our relationships with technology and nature. The medical conditions requiring to live with a physical, technological implant set on one side, we are all depending on technological cycles for survival in the 21st century. While technological devices have permitted the cultural transformations which have not been predicted, can we still talk about technology as tools and techniques that humans are operating from a distance?

Human-centered, egoistic understanding of agency must change.

Questioning The Notion of Agency

The exclusive and pretentious definition of the human agency has been losing its plausibility since the 19th century.

To begin with, the belief in the difference between human intentions and animal instincts became weaker when Darwin destroyed the boundaries between humans and animals. Through the deconstruction of the Descartes' autonomous human subject to 'wills to power', Nietzsche argued that human's choices are not based on one solid mind, rather on multiple inner forces directing to its various desires. His term 'will to power' was also not limited to humans, instincts are as much 'will to power' as life goals of an intellectual. Another wound to humanist agency came from Freud when he articulated the unconscious determinants of human behaviour. His altering of the much glorified human mind and rational decisions, down to irrationalities and primordial traumas which controls the decision making as well as actions, presented human agency as merely an illusion.

Agency of the people living under the dominance of social structures like the bourgeoisie, dictatorship, or governments has been discussed starting from the 19th century. For example, Marx argued that in modern

¹⁰ Anthropocene is period of time during which human activities have impacted the environment enough to constitute a distinct geological change. National Society, "Anthropocene", *National Geographic Society*, 2020 <<https://www.nationalgeographic.org/encyclopedia/anthropocene/>> [Accessed 8 July 2020].

¹¹ Stacy Alaimo, *Bodily Natures* (Bloomington: Indiana University Press, 2010), p. 143.

¹² Martin Heidegger and William Lovitt, *The Question Concerning Technology, And Other Essays* (London: Garland Publishing, Inc., 1977), p. xxix.

¹³ Tichō Research and Training Institute, *Dr Tim Ingold TEDx*, online video recording, YouTube, 4 Dec 2015, <<https://www.youtube.com/watch?v=RY4Vw-IT-x0>> [accessed 8 July 2020].

¹⁴ Rosi Braidotti, *The Posthuman* (Cambridge: Polity Press, 2013), p. 96.

society, actions of the people were controlled by the economic and political structures rather than their own free will.

According to Foucault, 'the individual subject is not an autonomous agent, but rather a social construct'¹⁵. He underlines the importance of power relations, which constitutes subjectivities in individuals as a sense of self, and on one another as an authority over the others' actions. He defines the type of power he is talking about as 'exerted over things and gives the ability to modify, use, consume or destroy them', 'a question of capacity'¹⁶ which is aligned with the understanding of agency we are dealing with. He explains subject and power as inseparable:

'It is a form of power which makes individuals subjects. There are two meanings of the word subject: subject to someone else by control and dependence and tied to own identity by a conscience or self-knowledge. Both meanings suggest a form of power which subjugates and makes subjects to.'¹⁷

Subjects were considered as the effects of power, according to Foucault's analysis. The power relations and networks are prior to the emergence of subject and object. The first definition of the subject he provides compromises the agentic relationship between subject and object where the subject is dominant to object. In contrast, the second definition implies that being a 'self' is an effect of subjugation as well. In contrary to handing agentic power to humans as an intrinsic capacity, Foucault's account of power counters the humanist understanding of agency as a thing to be hold.

The problem of talking about agency, before the event or action, is also considered in Alfred Gell's theory of agency. He states that 'we cannot tell that someone is an agent before they act as an agent'. Agency is, therefore, 'a factor of the ambience as a whole, a global characteristic of the world of people and things in which we live, rather than as an attribute of the human psyche exclusively'¹⁸. This is not to say that Gell recognised agency to non-humans directly. He made a distinction between *primary agents*, which are intentional, therefore human beings and *secondary agents*, which are artifacts that primary agents distribute their agency in causality¹⁹. In his theorization of 'doing' as agency, he focuses on 'relational, transitive, and causal implications of the notion'²⁰ where primary or secondary agents are all social agents which can be in the position of an *agent* or a *patient* who/which agency is exerted to, momentarily according to the social context.

Eduardo Kohn can be mentioned as a contemporary example of considering a non-human agency. He defends the non-human ethnicity as a study area, while drawing the boundary on being *selves*, not *things*: Selves, not things are qualified as agents²¹.

Dead End of Subject and Object Dualism

We discuss if artificial intelligence or animals have a consciousness so that we can discuss ethics about them. Seeking awareness is our way of accepting an entity's subjectivity. However, our science and technology are no

¹⁵ Mark Bevir, "Foucault And Critique: Deploying Agency Against Autonomy", *Political Theory*, 27.1 (1999), 67

¹⁶ Michel Foucault, 'The Subject and Power' *Critical Inquiry*, Vol. 8, No. 4 (1982), pp. 777-795 < <https://www.jstor.org/stable/1343197>> [accessed 19 June 2020] (p.786)

¹⁷ Michel Foucault, 'Afterword: The subject and Power', in *Michael Foucault: Beyond Structuralism and Hermeneutics*, ed. by Hubert L. Dreyfus and Paul Rabinow, 2d ed.(Chicago: University of Chicago Press, 1983), p. 212.

¹⁸ Alfred Gell, *Art And Agency* (Oxford: Clarendon Press, 1998), p. 20.

¹⁹ *Ibid.* 18

²⁰ Alfred Gell, *Art And Agency* (Oxford: Clarendon Press, 1998), pp. 20-22.

²¹ Eduardo Kohn, *How Forests Think* (Berkeley: University of California Press, 2013), p. 92.

more different than a sophisticated 'representation of matter to the cognizing subject as indubitable'²² on recognizing what we call conscience. Still, we are holding on to it as a lifebuoy, forgetting how *subjective* our understanding of consciousness is.

A New Worlding: Posthumanism

Even if we come to terms with the agency of all humans, non-human animals, and vegetal life, not being able to recognise the non-living agency shows that we are still thinking with the rules of the humanism. According to Heidegger, our modern metaphysics is nothing but a theory of 'man becoming the measure and center of beings'²³.

The history of metaphysics, in many aspects, is the story of our modern Western world. Descartes' ideas constituted the basis for Newtonian physics, thus today's technology and science. This axiomatics that we accept as truth without questioning became the beginning of a narrative, a 'humanist' narrative. Seeing the world as a narration indicates that it is a creative act that has much more to do with invention than discovery. 'World in itself is more of a verb than a noun, 'to world' rather than any world'. Worlding is an active ontological process of 'separation, categorization, division of things, affirmations that something exists or something doesn't exist'. And to find a balance between our worldings 'We invent a sort of metronome. It gives us the general idea of how to tune our activity of world-building. These general metronomes are what we call civilization when it's huge.'²⁴.

The metronome of the modern Western worlding is getting weaker. Our whole European culture is moving as towards a catastrophe²⁵ as Nietzsche foreseen. Humanist Western-European story, like any story, had a beginning in Renaissance and Enlightenment, and now it must end.

Now, we can invent a new worlding, posthumanism is the academic field of providing an area for discussion for creating it. It is not a dream of a future *posthuman*²⁶, but about creating a new existential approach now and here where 'beings' is always 'becoming with' and 'natures, cultures, subjects, and objects do not pre-exist their intertwined worldings'²⁷.

Posthumanism is a critique and antithesis of humanism and Enlightenment project. It de-constructs *human*, and de-center it in the network of existence. Posthumanism opposes the ideas of that some parts of the society being less 'human', humans being the most important species, and all definitions which insist things should exist in binary relativities built on exclusions.

Finding new ethical frameworks to recognize non-human agency is one most crucial interest of posthumanism. Our old ways of worlding are not enough to comprehend the phenomena such as Anthropogenic global warming, COVID 19 epidemy, Supermassive black holes. Understanding them demands a posthuman agency wriggled out of humanist worlding and its subjectivist metaphysics.

²² Steven V. Hicks, 'Nietzsche, Heidegger, and Foucault: Nihilism and Beyond', in *Foucault And Heidegger*, ed. by Alan Milchman and Alan Rosenberg, 16 vols. (Minneapolis, MN: University of Minnesota Press, 2003), p. 89.

²³ Martin Heidegger and William Lovitt, *The Question Concerning Technology, And Other Essays* (London: Garland Publishing, Inc., 1977), p. 17.

²⁴ Federico Campagna, 'Becoming Beautiful Ruins', 27 April 2020, Seminar.

²⁵ Friedrich Wilhelm Nietzsche and Anthony M Ludovici, *The Will To Power*, p. preface.

²⁶ Transhumanism is another movement that believes that human will evolve or upgrade itself to a posthuman in the future through speculative technologies. It is unfortunate that many scholars use these two terms as synonyms. Transhumanism is a human-centered thinking, and a technological reform of humanism.

²⁷ Donna Jeanne Haraway, *Staying With The Trouble* (Durham: Duke University Press, 2016), p. 13.

In The Search For A Posthuman Agency

From the 20th century postmodernism and poststructuralism, the studies of Jacques Derrida, Foucault, Deleuze and Guattari, alongside others, have been pre-requisites or co-requisites to posthumanist scholars. However, differentiating from their emphasis on the inquiry of the *subject* and *subjectivity*, posthumanist scholars have focused on the 'objecthood'. Object-Oriented-Ontology (OOO) and New Materialism have been the two significant sub-movements of posthumanism to take the question of objects for developing a profoundly inclusive notion of agency. Besides Actor-Network Theory, which focuses on the agentic capacities of mixed networks, including humans and non-humans.

OOO

Object-Oriented Ontology (OOO) is a significant realist movement studying the 'objecthood'. As a neo-Heideggerian thinking, it investigates the essence of objects, articulating that there is more to objects than the human understanding of them.

According to OOO, everything is an object. A fictional character, a piece of stone, Evolution Theory, or a cat are all objects. The ontological privileges of a subject or human or a living being do not exist in the flat ontology. It supports a flat ontology where there is no ontological privilege of any object on another. This allows us to take off the lenses of humanism and have a new perspective where all the things or 'beings' are not situated to humans. However, while opposing Kantian correlationalism, OOO values individuality and discreteness above all kinds of relationality and connotations of flux.

The agency in OOO is recognized to the objects as a source of determination. 'An agent is an object that not only is determined by other objects but also determines something out of itself, in his own right'²⁸. Yet, this is not an anthropomorphic understanding of agency related to the possibility of intentionality and consciousness of an object.

ANT

Actor-Network Theory (ANT) is another theoretical and methodological approach presenting an understanding of agency, which is not only an attribute of the human sovereign. The solution for the problematic dualism of technological determinism and social constructivism exemplifies the theories' basics. It suggests all accounts are socio-technological networks of dynamic relations, which consist of both human and non-human. Human agents and non-human actants are equal in ANT. An actor is not an object, but it is an association of heterogeneous elements consisting of a network. The agency, in this sense, is an attribute of the actor-network.²⁹

The networks that Bruno Latour depicts in the ANT, sometimes can be used with an *assemblage* of Deleuze & Guattari. Assemblage theory or metaphor is a dynamic ontological framework with fluidity, exchangeability. It is a collectivity whose origins are historical and circumstantial, not governed by a central power, complex configurations of physical, virtual, living and non-living³⁰. Both terms indicate the relationality of a

²⁸ Ruslanas Baranovas, 'Virtuality And The Problem Of Agency In Object-Oriented Ontology', *Open Philosophy*, 3.1 (2020), 233-241 <<https://doi.org/10.1515/opphil-2020-0106>>.

²⁹ Arthur Tatnall, 'Actor-network theory as a socio-technical approach to information systems research', in *Socio-Technical and Human Cognition Elements of Information Systems*, (USA: IGI Global, 2003), pp. 266-283

³⁰ Gilles Deleuze and Felix Guattari, *A Thousand Plateaus*, 8th edn (New York: Bloomsbury Publishing Plc, 2009), pp. 129-225.

heterogeneous ensemble, yet there are some crucial differences between them. The relations in the assemblage are external to the parts, they generate something *other* than themselves, and each element is also something *other* beyond the assemblage. The effect of the agency 'does not emerge as a result of the assemblage, but emerges with and in the process of assembling.'³¹ which makes them co-constitutive. In ANT, on the other hand, the effect would result from the whole of the network. Networks, in a sense, are more like mechanisms, than arrangements. They are less open-ended and less fluid but more conceptualised and systematic.

New Materialism

New Materialism is another realism focusing on the object, approaching it from the notion of matter or material. It directs our attention to the materiality of everything forms through physicochemical processes, which then makes it illogical to reduce any material to such processes. New materialists offer alternative understandings of material rather than the passive description of the Cartesian account, which built a dualism around mind and matter. They attempt to rediscover a materiality that materializes through immanent self-transformation, that compel us to consider a new causation and nature of capacities for agency.³²

To get rid of last bits of humanist agency and Cartesian causality, 'new materialists, are attempting to articulate a reconfigured vision of the human, located within a constant flux of material flows that enable uncertain becomings within a lively agential more-than-human world.'³³

Agency of A Vital Assemblage

Vitalism, in the new materialist account, is the tendency of a neo-Spinoist life to increase complexity³⁴. Life is not reduced to the living mechanisms of now, though. It encompasses the past and future of the material. Material circulates stars, earth, rocks, and rivers through animal and vegetal life. Vitalism rejects a unique substance added to matter which produces living condition; instead it argues vitality emerges from within and between matter.³⁵

Living and non-living is not a dichotomy. Agency cannot be centered in the living being; instead, it is about *emergence* and *sympoieis* - borrowing Donna Haraway's term, which can be translated as *becoming with or making with*³⁶.

Jane Bennet attempts to articulate agency in the North American Blackout through vitalism and assemblage theory. She mentions *enchanted materialism* to explain the capacity and ability of change, the 'contention of unpredictable motility intrinsic to matter'³⁷ occurring in all entities. She takes into account of the agentic capacity of non-living actants, and the assemblage they form together with humans and their effect on the black-out. Although her ideas support an anthropomorphism as well, her theorization is still inspiring for realizing the sympoiesis of human and non-human.

³¹ Martin Müller, 'Assemblage thinking and actor-network theory: conjunctions, disjunctions, cross-fertilisations', *Transactions*, 41.3 (2016), 217-229 < <https://doi.org/10.1111/tran.12117> >

³² Diana H Coole and Samantha Frost, *New Materialisms* (Durham [NC]: Duke University Press, 2010), pp. 1-20.

³³ Jeffrey Scott Marchand, 'Nonhuman Agency', in *Posthuman Glossary*, ed. By Rosi Braidotti and Maria Hlavajova, (London: Bloomsbury, 2018).

³⁴ Gilles Deleuze, *Bergsonism* (New York: Zone Books, 1991), pp. 1-7.

³⁵ Devyn Remme, "Vitalism", *Newmaterialism*, 2017 <<http://newmaterialism.eu/almanac/v/vitalism.html>> [Accessed 8 July 2020].

³⁶ Donna Jeanne Haraway, *Staying With The Trouble* (Durham: Duke University Press, 2016), pp. 58-98.

³⁷ Jane Bennet, 'The Agency of Assemblages and the North American Blackout', in *Vibrant Matter*, (Duke University Press, 2008) p.445.

Agential Realism

Karen Barad, who is a quantum physicist and a feminist philosopher, an example of the non-dualistic approach of new materialism, reads Bohr's quantum physics into Humanities, gifting us the theory of agential realism.

Agential realism is a new way of thinking about the world. Barad's theory is metaphysical as well as being ontological, ethical, and epistemological. To start with, she offers a new understanding of causality as 'intra-action', which neither deterministic nor predicates to free will, it is a constitutive act. It is used to replace interaction where the existence of the interacting bodies precedes the interaction³⁸. Barad argues that no entities exist before the intra-actions, everything emerges through various and numerous intra-actions in the level of quantum as well as in the realm of ideas. The emergence of the subject, from power relations, was also theorized by Foucault, here we can see the resonance. As of Foucault's definition of power being an event, agency to Barad is an enactment in its intra-activity. Intra-activity is a dynamism of forces in which all designated *things* are constantly exchanging and diffracting, influencing, and working inseparably.³⁹

Barad underlines she is defining neither an agent nor an actor or an actant or a network or assemblage – as in Actor-Network Theory- who or which holds the agency. The definition of agency is retaliated in agential realism, it is not the capacity to act, rather the enactment, the collaborative event of 'doing and being in its intra-activity'. It is 'a matter of possibilities for reconfiguring entanglements'.⁴⁰

³⁸ Rick Dolphijn and Iris van der Tuin, 'Interview with Karen Barad', in *New Materialism: Interviews & Cartographies*, (Ann Arbor: Open Humanities Press, 2012), pp. 48-71.

³⁹ Karen Barad, *Meeting The Universe Halfway* (Durham, N.C.: Duke University Press, 2007), p. 141.

⁴⁰ Ibid. 39

Blurring Boundaries of Agency Over Art

Worlding Is Art, Art Is Worlding

Worlding is an aesthetic, creative act, much like art.

Worlding, as we mentioned before, is making sense of the avalanche of perceptions. As any metaphysical act worlding is also axiomatic, therefore the rules are arbitrary. However, it is an arbitrariness about perception, thus aesthetic as the word comes from *aistheta* in Greek means perceptible things. Whatever art is or isn't, it will always be about our world, now and here. How we are worlding is also how we are making and thinking about art.

Whether the artists are shaping society or being affected by the changes in society is a discussion of determinism. However, I would argue that artists seem to be a little bit ahead in our case of posthuman worlding, which will be seen easier if we draw parallels between art movements and the agential shift in philosophy.

While the humanist worlding metronome was getting weaker in Western society, artists were rejecting their role as the dominant, intentional, rational, and autonomous agent of art. The story of the human agent was ending, and new stories were about to be arisen and reflected and enacted through art.

If we look at the art history with an eye on delegation of control and agential choices of artists, we realize that they were recognising the more-than-human agency of posthumanism. The few examples we will discuss here are from Western society as so as the discourse of agential shift was in Western society. It would be a shame to think about these art movements and artists only in the context of agency. However, for the course of this research, I have focused solely on the contributions and new perspectives that I believe they brought to the understanding of agency.

How Agential Relations Have Changed In Art: A Retrospect

Artist As Human Agent of Renaissance

The artist of the Renaissance was intentional in his creativity and rational in producing work for specific depictions and compositions. He had to master his technique to have full agency over the material, as well as the composition.

The human was the measure of everything, the linear perspective of human visual perception has become the general technique, and it was even used in exaggeration to the point of elongation of the figures.

Artist was autonomous; working in his studio, he must be able and capable of any requirement of *his* high duty, which is depicting human ideal. Every detail going into the artwork was under the artist's agential dominance.



Figure 2: Clemente Papi, 'Plaster cast of Michelangelo's David', 1856. Original is made from marble by Michelangelo.

Leaving The Studio, Leaving The Control

When the Impressionists left their studio to draw real life, it was also a rebellion against the notion of art as a representation of the artist's mastery over composition and material. They called themselves 'flaneurs' translates as man-about-town, artist of modern life. They wanted to go out and let the Parisian metropolitan life decide on the subject, letting go of their agency on composition and light. Furthermore, 'this required artists to banish the pre-conceived notions about object and colour from their mind - such as ripe strawberries being red'⁴¹, they had to forget what they have learned, and leave the 'ration' behind.

The story of the human agent has started to be questioned and opposed by modern artists, through *his* intentionality of the art subject and rational prejudgements.

⁴¹ Will Gompertz, *What Are You Looking At?*, 3rd edn (London: Penguin Books, 2016), pp. 15-30.



Figure 3: Edouard Manet, 'The Absinthe Drinker', 1859

Denying It All About The Human Agent

'How can one get rid of journalism, worms, everything nice and right, blinkered, moralistic, Europeanised, enervated? By saying Dada.'⁴²

Modern art's discourse through the 1800s has witnessed the philosophical and scientific strikes against humanism's human. In this environment multiplicity of perspectives were being studied by Picasso, Kandinsky was after making art in an 'anti-logical' way and the unconscious mind of the audience was under investigation of Malevich. However, it was not through the end of WWI that the Dada movement appeared to destroy the portrayal of the human agent in the art of European Western society.

⁴² Will Gompertz, *What Are You Looking At?*, 3rd edn (London: Penguin Books, 2016), p. 224.

Dadaists were anti-cultural, anti-social, anti-art, anti-everything. They offered to be 'unreasonable, illogical, and lawless'⁴³ the intentional, rational, sovereign human agent was a lie to them, and they were determined to show it.

Dadaists were also the first ones to incorporate systems of chance in their work. They created poems from random pieces of newspaper articles, arguing that traditional poem is fake with an ordered structure and planned lines. Life, on the other hand, is random and unpredictable. They were destroying intentionality on art besides recognizing the unpredictability of lively relations of the world, which cannot be ordered by human agents. Agency of the artist was being shared by the intricate relationality of life.

Question of Object Enters

Be it ascribing agency to objects or defining agential intra-actions, non-human and non-living agency is a topic that is in the posthumanism agenda only since the 90s. Yet in 1916, Marcel Duchamp decided to give the aesthetic control of the artwork to a non-living object of daily life, a urinal (see Figure 4).

Even though there were various critiques to the art scene in Fountain, which eventually changed what the rest of the world considers as art and accepting *conceptual art*, we can still realize 'Fountain' as an artwork in which the artist has no agency over its materiality. Artist's mastery over material is out of the topic; he only manipulated it slightly. Only the idea is intended by the artist. The object itself was recognized as a medium for the communication of ideas. Duchamp's Ready-Mades followed this trend; mundane objects were retaining agency on art with their own *being* and artist's ideas fused together.



Figure 4: Marcel Duchamp, 'Fountain', 1917. (authorised replica 1964)

⁴³ Will Gompertz, *What Are You Looking At?*, 3rd edn (London: Penguin Books, 2016), p. 222.

Letting Go of Intentions

Surrealism was openly inspired by Freudian discoveries about the unconscious. Methods like automatic drawing⁴⁴ were used to access the unconscious mind and let it take control of the artwork. Artists were not set out to produce specific images or study an idea. This non-existence of an intention while starting the work was denying the agency of humanism. The technique of automatic drawing is much like an attempt to skip the rational and the intentional qualities of the mind, to present a human unknown to the ideal humanism.



Figure 5: Joan Miro, 'Harlequin's Carnival', 1925. An example of automatic drawing.

Salvador Dalí's take on Surrealism was to 'systemise confusion and thus help to discredit the world of reality completely'.⁴⁵ The world, as we know it, was under interrogation. Surrealists were there to remind us that everything is an illusion. Could it be time to question what we know about reality, our metaphysical beliefs, or worlding?

It was also the Surrealist society where the question of the agency of women surfaced with an exhibition called 'Exhibition of 31 Women' in 1942 by Peggy Guggenheim's gallery. Women artists were being recognized as 'less artist' as they were deemed to be 'less human' by humanism. This exhibition promoted their agency on art via some of the most influential artists of Surrealism, like Frida Kahlo and Oppenheim.

Altering the hubris of the human mind, with its unconscious secrets, wild thoughts, and dreams, Surrealists were already playing with Descartes' mental subject. An example of exploring the mind/matter dualism, Man

⁴⁴ Automatic writing is drawing anything that comes to mind without stopping allowing the artist to go in a trans-like state where the conscious mind is totally disconnected. Max Ernst, had a different method he called "frottage". He imprinting some textures on a paper and draw according to what he sees in the random patterns.

⁴⁵ Will Gompertz, *What Are You Looking At?*, 3rd edn (London: Penguin Books, 2016), p. 248.

Ray's work 'The primacy of matter over thought', can be considered, which puts it sufficiently in the name (see Figure 6).



Figure 6: Man Ray, 'The Primacy of Matter over Thought', 1929.

Intra-Acting With More-Than-Human Forces

'The modern artist ... is working and expressing an inner world – in other words expressing the energy, the motion, and other inner forces.' Pollock

There is a lot to realize about Jackson Pollock's works with posthuman agential lenses. We can make the first parallels with Nietzsche's will to power as inner forces and Freud's unconscious mind as the inner world.

What about the infamous paint dripping? Pollocks' innovation was a huge canvas splattered with paint. Incorporating gravity in his process can be seen as recognizing a force outer than a human agent. Besides this apparent sharing of agency with the gravitational forces, there was more in his process. To get the effects of his paintings, simply dispensing pigment freely in the air would not be enough, 'he had to deploy the pull of gravity in a way that enables his 'energy and motion made visible'⁴⁶. He was compromising with gravitational forces. It wasn't a total human agency nor a total gravitational agency; it was *sympoietic*. He put the canvas on the floor while painting, which opens a whole another discussion for subject-object dualism and intra-action. Painters before Pollock, were observers having a distance with their artwork and themselves, or with their subject of context and themselves. By being inside the artwork, in the 'arena' as he calls it⁴⁷, Pollock was denying the distance between subject and object and one's agency over the other.

⁴⁶ Claude Cernuschi and Andrzej Herczynski, "The Subversion Of Gravity In Jackson Pollock's Abstractions", *The Art Bulletin*, 90.4 (2008), 616-639 <<https://doi.org/10.1080/00043079.2008.10786416>>.

⁴⁷ Phoebe Roberts, "Number 14", *Tate*, 2020 <<https://www.tate.org.uk/art/artworks/pollock-number-14-t03978>> [Accessed 8 July 2020].



Figure 7: Jackson Pollock, 'Full Fathom Five', 1947

Art-Making With

In the beginning of the 1950s, the art world was full of expressions of artists, when Rauschenberg came along to change this. Much like Duchamp he also continued to value mundane objects, but not even as a medium to communicate through. This time objects were in their own mysterious 'being' and 'becoming with' through assemblages when there were 30 more years to the ontological framework Assemblage Theory was going to be presented by Deleuze&Guattari.

In his work, *Monogram* (1955), Rauschenberg also inspired a new way of including the audience as well as happenings in life to his art with his series of *White Paintings*. A shadow of the observer or a light ray on the painting was a part of the art. Art was becoming an assemblage of not only mundane objects but also the audience and present mattering of life.

When Rauschenberg, John Cage, and Merce Cunningham grouped up in North Carolina in the beginning of the 1950s, they created a multi-artform called *Happenings*. Dancers, sculptors, and composers were all performing in without a pre-determinant agenda; they were *becoming with* and *making with* each other, the outcome was a maybe chaos, wasn't life itself, too? The name also offers an idea of agency, since there is a nuanced difference between a happening and action; attribution of agency turns a happening into an action⁴⁸. Action is related to an agent with an intention or volition, which presents why the action is taken. Yet a happening does not need these to happen. The series was a rejection of an intentional agent in the equation.

John Cage was also interested in scores and algorithms, kind of rules that he made music with. He was delegating the control of the compositional process through these. The decision making on art was being executed by these algorithms. Some of them are more straightforward for example a performance duration

⁴⁸ Ibid. 8

would be until the last audience leaves the room. Some of them included machinery like sensors as in the *Reunion* music was produced from the chess players' movements and some even included natural phenomena like *Atlas Eclipticalis* where the position of the stars became a musical score. The human agent of the art was becoming less visible in the artwork, and systems were used in the decision making besides the intricate relationality of life, presenting itself as *chance*.

Constant Flux And Surrendering to Performance

Rauschenberg's and Cage's works inspired the Fluxus Movement and performance art as well as computer art and interactive art, which are the trends continuing in the art world today.

Fluxus meant *flow*; according to Joseph Beuys, who manifested the movement, art was fusing everything and anything. The audience, performer, chance, and life was happening together in constant flux, much like the new materialisms theorizing of life as the constant flux that enable uncertain *becomings* within an agential more-than-human world.

Performance art is a complicated one to talk about agency. On the one hand artist's material and medium are her body; there is no entity else to share the control. If we consider improvisational performances, on the other hand, there is no control. 'A loss of control, the surrendering of the agency is a necessary condition for the possibility of improvisation'⁴⁹. While performing, artists do not have a gap between deciding and acting. Descartes's dualism of mind and body is irrelevant for the performing artist, making it difficult to talk about an intention over an action, which is the base for the humanist agency. Also, in the non-improvised or less-improvised performances artists like Yoko Ono or Marina Abramović's art, art is not what the performer does, it is emerging through the performance. When Abramović did the 'The Artist is Present', art was the intra-acting of her and the audience (see Figure 8) . Different for every audience, for every experience because it was emerging again and again. Agency in their art was not something hold or shared, it was the enactment of the intra-acting of both sides.



Figure 8: Marina Abramović, 'The Artist Is Present', 2010

⁴⁹ Edgar Landgraf, 'Improvisation, Posthumanism, and Agency in Art', *Liminalities: A Journal of Performance Studies*, 14.1 (2018), page range (pages used). 208-222(212).

Audience, As Well

Op art was another major art movements in the 1960s, which had a different take on the delegation of control in the artwork. Geometric shapes in the artwork were causing perceptual illusions in the viewers' sight. It was said that art was not on the artwork itself, it was in the retina of the individual. The audience might have long been considered as a part of the art, but it has never been so blatant: without an audience, there was no art. *Op art* had a kind of a different shade from the precedents about audience inclusion to art, it had a level of intra-activity for the occurrence of art.

In addition, in the previous art movements, the audience was considered rational or at least intentional. For example, they were given tasks to do in Kaprow's work '18 Happenings in 6 parts', or they had the choice to do whatever they want to Abramovich in Rhythm 0. However, in op art, the optical illusion was happening without any intention or decision of the viewer, and there was no way to stop it as long as you are looking at it. It can be interpreted as a reminder to the audience that they also do not own agency over life and art.



Figure 9: Bridget Riley, 'Blaze', 1964

Cybernetic Becoming With

Recognizing agency of the objects, happenings in life, and the algorithms were enough to recognise the agency of machines in the art world. When the Cybernetic Serendipity show took off in London 1968, modern technology and machines claimed their part in the assemblage of art. Generative computer algorithms or

interactive machines were being presented as collaborators, composers, or as the artworks themselves.⁵⁰ The human artist was not holding on to agency on art as something only for human, life, audience, or nature; machines could play a part too. And they did. Computer art, with various other technological tools, became a part of our art-making, presenting, and artworks themselves.

‘Our life is half natural and half technological. Half-and-half is good’ as Nam June Paik states. Our world was more-than-human, so was our art, and it was good.

New Media: AI Art and More

Since the ‘60s, rapidly improving emergent technologies have become a part of the art. Computer technologies, like 3d graphics, real-time generations, web technologies, machine learning technologies like artificial intelligence and generative neural networks, even biotechnologies, and blockchain, started to be used as a creative medium by contemporary artists (see Figure 10). This type of art is usually called as new media art due to its adoption of emergent media technologies. Life has become a natural-cultural-technological compost, so as art.



Figure 10: Amy Karle, 'Regenerative Reliquary', 2016

⁵⁰ John William Turner, *Cybernetic Serendipity (ICA) - Late Night Lineup (1968)*, online video recording, YouTube, 8 October 2013, <<https://www.youtube.com/watch?v=n8TJx8n9UsA>> [accessed 8 July 2020].

AI art is an emergent new media art movement. It usually refers to but not limited to artworks created with the generative adversarial network(GAN), which is a class of machine learning frameworks that generates original output through processing big data sets. It takes increasing media coverage nowadays with controversies around its agency. This is a different sharing of agency on art. GANs are more of agents on their own, than any other machines or technologies used before. Artists are intra-acting with machine learning algorithms, in a way they share and create agency together (see figure 11, 12). What this new movement will bring to the understanding of agency, or possibly create change, is at stake of our interpretation of it.



Figure 11: Memo Akten, 'Learning To See', 2019



Figure 12: Sougwen 憐君 Chung, 'Drawing Operations Unit: Generation 2 — MEMORY', 2017

A Theory of AI Art as an Agential Assemblage

Tracking agential shift through art and academia, I realised it is innovations in art and the interpretation of them that enacts change in worlding. Therefore, I want to offer a new consideration of AI art directing to a posthuman future with a more-than-human agential relationality, instead of the common interpretation as creativity enhancement, which I believe resembles humanist pretension.

In my theory, art is an agential assemblage in its intra-activity within its constituent parts, which are in a constant change. Everything, every technology or collaborator or material in the process as well as the audience, is a part of this assemblage, while the artist is who arranges the first conditions of this assemblage. The intra-action between the parts of assemblage is how art emerges as an agency, which enacts change in the world.

I am inspired by Gell's Anthropological Theory of Art⁵¹, which defines art as a 'mediation of agency by indexes', and new materialist Bennet's attempt to articulate an agency of a vital assemblage, yet I consider the terminology about agency and intra-action in the sense of Baradian agential realism.

I want to begin with how and why art can be thought of as agency. Seeing art as *doing* is the first step. Before the establishment of Fine Arts in the academia in the 17th century, which created the separate academic divisions of art & humanities and nature & sciences, art was not just related to human creativity and expression or meaning and communication. Art was understood more like *doing* as in the sense of making craft through techniques to practice it.⁵² In the Anthropological Theory of Art, Gell also takes this account of understanding art as 'doing', which I also agree with. Without doing, meaning is meaning, and communication is communication, what enables art is the 'doing'. In the second step, I want to mention Barad's definition of agency as doing and being in its intra-activity. Differentiating from the intentional sense of humanist agency, doing has to be actualized by definition, which is 'enacted' in Barad's terms. The same explanation of not being able to talk about agency before it is enacted is also present in Gell's account as he also theorises doing as agency.

The type of agency that art is about interference and cognitive operation in Gell's theory. I want to take this further by adding insights from agential realism. The entanglements of meaning and matter through art are 'iteratively reconfigured with each emergent intra-action'⁵³, which makes art a flux whose effects are in constant change. Therefore, the agency of art cannot be constrained to the cognitive experiences of humans. It can create effects in all materiality that are not foreseeable to the artist or comprehensible by the audience.

My choice of using an assemblage instead of an index as in Gell's theory or a network in ANT is similar to Bennet's with the former's fluidity, continuity, and liveliness since the generative machine learning programs keep learning and evolving. In addition, coming from a genealogy of *arrangement* I found it more relevant to a creative process. However, using assemblage theory and intra-action in the same context can lead to confusion, since in agential realism, there are no entities existent before the intra-action to be a part of the assemblage. In my use intra-action, I discard the pre-existent conditions of the components before the doing of art. Because in AI art, datasets and algorithms do not mean anything before they put into work together. This is the same as the other parts of the assemblage I will mention shortly that their condition as art components emerges through the intra-action.

I tried to categorize the component or parts that create the assemblage of AI art, yet I concluded that a detailed categorization is not possible and also not suitable for the open-ended and heterogeneous nature of

⁵¹ Ibid. 18

⁵² Mick Wilson, 'How Should We Speak About Art and Technology?', *Crossings: Electronic Journal of Art and Technology*, 1, 1(2001), <<https://crossings.tcd.ie/issues/1.1/Wilson/>> [accessed 8 July 2018]

⁵³ Karen Barad, *Meeting The Universe Halfway* (Durham, N.C.: Duke University Press, 2007), p. 393.

assemblages. Nevertheless, I want to mention some groups adding they do not specify strict lines, nor have to be existent in every artwork.

The first group is the creatives. Generative computer algorithms, mechanical drawing machines, or drawing, singing, or dancing humans, in sum, every entity plays a role in the process with a generative contribution are in this group. Yes, I want to make my point clear that creativity is not exclusive to humans. Just as like agency, creativity had also been depicted as an attribution of God before Renaissance and attribution of human afterward. As for the posthumanist thinking and my belief that everything and anything is creative in the act of creating, quoting from the AI artist Christian Mio 'when we see machines can be creative as well, we can rethink what a posthuman world is.'⁵⁴

The second group is the materials. In AI art, material is usually the dataset which is processed in the GAN. However, various other materials can be included in the process, such as paint, as in Chung's work (see Figure 12).

The third group is the audience. Inspired by both Gell's theory and my own practise, I believe individual experiences of the audience is a part of the art. It is open-ended as of an assemblage and ever emergent with every audience.

The last group I want to mention is the concept. Some work dictates a distinct concept, while some do not. However, the inspiration, inquiry, or research of the artist is a component of the assemblage. It intra-acts with the other parts in different dimensions.

Artists, to mention, at last, is the designer of this assemblage, who puts together the parts. They can be a creative, a material, or a concept if they prefer to, but these would not decrease their position as the designer of this assemblage. Assemblage changes through intra-actions, thus artists can only set some initial state, but cannot predict or control the agency of art wholly.

⁵⁴ Christian Mio Loclair, 'Biotechnology and the Posthuman', 21 Feb 2020, Speech.

Case Study

Description of The Artwork

To apply my agential assemblage theory of art, I have chosen the artwork Mosaic Virus by Anna Ridler because of the approved success of the work and also my personal admiration.⁵⁵



Figure 13: Anna Ridler, 'Mosaic Virus', 2019

⁵⁵ It was a part of Barbican Centre AI: More Than Human exhibition in 2019, and it has also received an honorary mention in the 2019 Ars Electronica Golden Nica Awards as well as being shortlisted for Lumen Prize in 2019, while being showcased in many other exhibitions around the globe in 2019 and in 2020

'Mosaic Virus (see Figure 13) is a video installation generated by an artificial intelligence of tulips, creating a Dutch still life for the twenty-first century. Over the course of a tulip season spent in Amsterdam, Ridler collected ten thousand tulips which she then photographed and hand classified for the dataset. Drawing historical parallels from the 'tulip mania' that swept across the Netherlands in the seventeenth century, the stripes on the tulips respond to the rise and fall of bitcoin prices in real time, drawing a parallel to the hysteria and speculation around crypto-currencies today.'⁵⁶

Firstly, I will analyse the components of the assemblage and their intra-actions. Then, I will discuss the agency which this whole assemblage is enacting.

Groups of the Assemblage Components

-Creative/Material: Trained GAN

GAN is a framework which has been created with ML algorithms that generate original still images using what it had learned from the dataset, Machine Learning is the creative in our assemblage. The framework of GAN is designed by Ian Goodfellow and his colleagues in 2014 and available as open-source code. It has been widely used by various artists as well as Anna Ridler with some alterations. However, the images it creates depends on the dataset, which is a material grouping. Since these two works together, I want to think the GAN algorithm and dataset as sub-component together of the Trained GAN, which produces the original still images. The dataset for this work is the photographs taken by Anna Ridler.

-Creative: Bitcoin

While bitcoin is a cryptocurrency using blockchain algorithms and many other complex networks, it resembles nearly a performer in this context co-acting the composition with other creative components. It also has a sub-assemblage if we consider the technological architecture and millions of traders.

-Audience: Viewers of the work in any space and time

-Concept: Historical event of Tulip Mania

Intra-Actions

The intra-actions within this assemblage is how art is enacted. I will try to unfold these entanglements to analyse how they constituted the *becoming with* of art.

-Tulip Mania Event – Trained GAN

The mosaic virus was infecting tulips with stripe patterns on their petals in the 1600s, which drove speculative buying of tulips. Through the intra-action of this event and GAN, the 10,000 images of tulips with the labels

⁵⁶ Anna Ridler, "Mosaic Virus, 2019 — ANNA RIDLER", ANNA RIDLER, 2020 <<http://annaridler.com/mosaic-virus>> [Accessed 9 July 2020].

about color and scatter becomes the dataset for the ML algorithms to work with. Tulip Mania becomes a narrative of the artwork through visuals of infected tulips.

-Tulip Mania Event – Bitcoin

In Tulip Mania, the striped petals were getting more expensive in the market through its speculative buying where people did not know how the pattern occurs, while in Bitcoin, traders do not necessarily know how and why it is valuable. Intra-action of these two components creates the linear relationship of density of stripes and the price of Bitcoin in the artwork

-Bitcoin – Trained GAN

While Bitcoin is a distributed infrastructure, a network that creates the cryptocurrency, in this intra-action, Bitcoin becomes only an entity of numbers changing over time to constitute the change of density of the stripes with GAN. The changing *stripyness* on the petals of the generated tulips emerges through this intra-action.

Agency of Mosaic Virus

Ridler mentions about the work as:

‘I wanted to draw together these ideas about capitalism, value, and the tangible & intangible nature of speculation and collapse from these two different yet similar moments in history.’⁵⁷

I think Mosaic Virus enacts this relation between the historical event and today vividly, making us, as audiences, question what kind of a story that Bitcoin would make in the future. Furthermore, it questions the possibility of human control over nature, which has been a crucial topic in posthumanism, as we discussed before. Can humans control a virus really? Or make a tulip bloom? Mosaic Virus enacts change by affecting audiences around these topics.

By recognising agency of both the assemblage of Mosaic Virus and actually thinking about its components as intra-active elements which creates the agency without one being dominant over others, I believe Mosaic Virus can make an impact on the world.

Even though she started with some intentions to the work, the assemblage of machine learning and Bitcoin avoid her intentions to limit the agency of the works. She quotes:

‘It is a mistake to think that you ever have control over these things. It’s impossible to predict what will come out in each of the stills. I can guess, but I cannot know, and this for me, is really exciting and makes it such a rich field for creative people to work with.’⁵⁸

Yet, the further enactments of the intra-actions will be invisible for us as audiences, such as what each individual feels and thinks upon encounter with Mosaic Virus, or the effects of the ML use on the climate and nature.

⁵⁷ It's Nice That, *Nicer Tuesdays: Anna Ridler*, online video recording, YouTube, 14 Jan 2020, <https://www.youtube.com/watch?time_continue=1&v=VlJfvoEXKbk&feature=emb_logo> [accessed 8 July 2020]

⁵⁸ Ibid. 57

Conclusions

My research showed how art has initiated a much-needed change in the understanding of the world from a hegemony of the human agent to a more-than-human agential relationality, parallel with but prior to movements in academia. Therefore, I approved my hypothesis right that art changed the world through history; accordingly, AI art can also change the world, or more precisely, our worlding.

I started my research by analysing the roots of modern Western society's belief in the human agent, and how it changed through the 19th and 20th century as well as why it must change further. The age of Anthropocene demands a new understanding of agency and causality to come to terms with the transformations we are facing. I discussed that we have to change our human-centered thinking if we want to have a future that we would wish for. Later, I presented what the posthumanist thinkers have been suggesting for a more-than-human understanding of agency and causality, which can be the base of a new worlding. To see art's impact, I made a second of analyses where I investigated the parallels between the emergence of posthuman agency in academia and in art history starting from modern art. I realised that how art causes change is related to the agential choices of artists and the understanding of them. After I analysed how modern art movements contributed to the change through their understanding of art, I theorised a new understanding for AI art, hoping it to give rise to a change which has already been started towards a posthuman world.

How we think about the world influences our art and how we think about art influences our world. Reflecting on my theorisation, I believe if we understand not only AI art but actually an art in general as an agential creative assemblage, we can comprehend and accept the other assemblages in life which we are a part of. Responsibility and ethics are essential issues considered by posthumanist philosophers investigating non-human agency. Sharing agency with more-than-human assemblages or enacting agency through constant intra-actions with the relations we are into, do not mean humans have less responsibility. In contrary, it means we do not exist outside of these relations, or there is no another to point out for accountability. We are in this together as responsible and accountable for our intertwined futures.

In consideration of technology differentiating from nature, non-human agency of tools or tool-being is another topic that has been widely discussed in the philosophy of technology by Heidegger and Hegel as well as in media philosophy by Marshall McLuhan. Future work around the topic of the understanding of AI art, this aspect of tools in comparison to agents can be researched.

I believe that I have created a new insight into AI Art, as well as agency in art history, by trying to see them through the posthumanist understanding of agential lenses. The urgency of recognising more-than-human agencies in life is more present than ever. With this study, I hope to enact a positive change in the shifting worldings of modern Western society, as well as to elucidate more of posthumanist thinking, possible futures of art-making, and the place of emergent technologies in our life.

Bibliography

Journal Articles

- Baranovas, Ruslanas, 'Virtuality And The Problem Of Agency In Object-Oriented Ontology', *Open Philosophy*, 3.1 (2020) <<https://doi.org/10.1515/opphil-2020-0106>>
- Bevir, Mark, "Foucault And Critique: Deploying Agency Against Autonomy", *Political Theory*, 27.1 (1999)
- Cernuschi, Claude and Herczynski, Andrzej, "The Subversion Of Gravity In Jackson Pollock's Abstractions", *The Art Bulletin*, 90.4 (2008) <<https://doi.org/10.1080/00043079.2008.10786416>>
- Foucault, Michel, 'The Subject and Power' *Critical Inquiry*, Vol. 8, No. 4 (1982), pp. 777-795 <<https://www.jstor.org/stable/1343197>> [accessed 19 June 2020] (p.786)
- Giustiniani, Vito R. , "Homo, Humanus, And The Meanings Of 'Humanism'", *Journal Of The History Of Ideas*, 46.2 (1985) <<https://doi.org/10.2307/2709633>>
- Jeannerod, Marc, 'The Mechanism Of Self-Recognition In Humans', *Behavioural Brain Research*, 142.1-2 (2003) <[https://doi.org/10.1016/s0166-4328\(02\)00384-4](https://doi.org/10.1016/s0166-4328(02)00384-4)>
- Landgraf, Edgar, 'Improvisation, Posthumanism, and Agency in Art', *Liminalities: A Journal of Performance Studies*, 14.1 (2018), page range (pages used). 208-222(212)
- Müller, Martin, 'Assemblage thinking and actor-network theory: conjunctions, disjunctions, cross-fertilisations', *Transactions*, 41.3 (2016) 217-229 < <https://doi.org/10.1111/tran.12117>>
- Wilson, Mick, 'How Should We Speak About Art and Technology?', *Crossings: Electronic Journal of Art and Technology*, 1, 1(2001), < <https://crossings.tcd.ie/issues/1.1/Wilson/>> [accessed 8 July 2018]

Books

- Alaimo, Stacy, *Bodily Natures* (Bloomington: Indiana University Press, 2010)
- Barad, Karen, *Meeting The Universe Halfway* (Durham, N.C.: Duke University Press, 2007)
- Bennet, Jane, 'The Agency of Assemblages and the North American Blackout', in *Vibrant Matter*, (Duke University Press, 2008)
- Braidotti, Rosi, *The Posthuman* (Cambridge: Polity Press, 2013)
- Coole, Diana H. and Frost, Samantha, *New Materialisms* (Durham [NC]: Duke University Press, 2010)
- Deleuze, Gilles and Guattari, Felix , *A Thousand Plateaus*, 8th edn (New York: Bloomsbury Publishing Plc, 2009)
- Dolphijn, Rick and Tuin, Iris Van Der, 'Interview with Karen Barad', in *New Materialism: Interviews & Cartographies*, (Ann Arbor: Open Humanities Press, 2012)
- Foucault, Michel, 'Afterword: The subject and Power', in *Micheal Foucault: Beyond Structuralism and Hermeneutics*, ed. by Hubert L.
- Dreyfus and Paul Rabinow, 2d ed.(Chicago: University of Chicago Press, 1983)
- Gell, Alfred, *Art And Agency* (Oxford: Clarendon Press, 1998)
- Gompertz, Will, *What Are You Looking At?*, 3rd edn (London: Penguin Books, 2016)
- Haraway, Donna Jeanne, *Staying With The Trouble* (Durham: Duke University Press, 2016)
- Hayles, Nancy Katherine, *How We Became Posthuman* (Chicago: Univ. of Chicago Press, 2010)

Heidegger, Martin and Krell, David F., *Nietzsche*, 4 vols. (San Francisco, Calif. u.a.: Harper & Row, 1982)

Heidegger, Martin and Lovitt, William, *The Question Concerning Technology, And Other Essays* (London: Garland Publishing, Inc., 1977)

Hicks, Steven V. , 'Nietzsche, Heidegger, and Foucault: Nihilism and Beyond', in *Foucault And Heidegger*, ed. by Alan Milchman and Alan

Rosenberg, 16 vols. (Minneapolis, MN: University of Minnesota Press, 2003)

Kohn, Eduardo, *How Forests Think* (Berkeley: University of California Press, 2013)

Marchand, Jeffrey Scott , 'Nonhuman Agency' , in *Posthuman Glossary* , ed. By Rosi Braidotti and Maria Hlavajova, (London: Bloomsbury, 2018)

Nietzsche, Friedrich Wilhelm and Ludovici, Anthony M, *The Will To Power*

Tatnall, Arthur , 'Actor-network theory as a socio-technical approach to information systems research', in *Socio-Technical and Human Cognition Elements of Information Systems*, (USA: IGI Global, 2003)

Tuin, Iris Van Der, *Generational Feminism: New Materialist Introduction To A Generative Approach* (London: Lexington Books, 2014)

Lectures & Talks

Campagna, Federico 'Becoming Beautiful Ruins', 27 April 2020, Seminar

Loclair, Christian Mio, 'Biotechnology and the Posthuman', 21 Feb 2020, Speech

Artworks

Akten, Memo, *Learning To See* (İstanbul: Sonar Istanbul)

Ridler, Anna, *Mosaic Virus* (London: Barbican Centre, 2019)

Web Sources

Ferrando, Francesca, 5. *What Does POST-ANTHROPOCENTRISM Mean? Dr. Ferrando (NYU) - Course "The Posthuman" Lesson n. 5*, online video recording, YouTube, 7 Dec 2017, <<https://www.youtube.com/watch?v=UNh1r-eOoiQ&list=PLAXeXR1DbC1rvnBtdo2-ol-3V8ePmr7jp&index=5>> [accessed 8 July 2020]

Grendler, Paul, "Humanism", *Oxford Bibliographies*, 2017 <<https://www.oxfordbibliographies.com/view/document/obo-9780195399301/obo-9780195399301-0002.xml#obo-9780195399301-0002-div1-0001>> [Accessed 8 July 2020].

It's Nice That, *Nicer Tuesdays: Anna Ridler*, online video recording, YouTube, 14 Jan 2020, <https://www.youtube.com/watch?time_continue=1&v=VIJfvoEXKbk&feature=emb_logo> [accessed 8 July 2020]

National Society, "Anthropocene", *National Geographic Society*, 2020 <<https://www.nationalgeographic.org/encyclopedia/anthropocene/>> [Accessed 8 July 2020].

Remme, Devyn, "Vitalism", *Newmaterialism*, 2017 <<http://newmaterialism.eu/almanac/v/vitalism.html>> [Accessed 8 July 2020].

Ridler, Anna, "Mosaic Virus, 2019 — ANNA RIDLER", *ANNA RIDLER*, 2020 <<http://annaridler.com/mosaic-virus>> [Accessed 9 July 2020].

Roberts, Phoebe, "Number 14", *Tate*, 2020 <<https://www.tate.org.uk/art/artworks/pollock-number-14-t03978>> [Accessed 8 July 2020].

Tlchq Research and Training Institute, Dr Tim Ingold TEDx, online video recording, YouTube, 4 Dec 2015, <https://www.youtube.com/watch?v=RY4Vw_IT-x0> [accessed 8 July 2020]

Turner, John William, *Cybernetic Serendipity (ICA) - Late Night Lineup (1968)*, online video recording, YouTube, 8 October 2013, < <https://www.youtube.com/watch?v=n8TJx8n9UsA>> [accessed 8 July 2020]

Wilson, George and Shpall, Samuel, "Action", *Stanford Encyclopedia Of Philosophy*, 2020 <<https://plato.stanford.edu/entries/action/>> [Accessed 8 July 2020].