
TO SERIOUSLY AND SINCERELY
BELIEVE IN SPOOKY ACTION
AT A DISTANCE
Josefina Anjou

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Gerrit Rietveld Academie, Fine Arts Department
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INTRODUCTION

As the knowledge seeking sun-in-gemini I am born to be I often find myself deeply involved in a subject, only to leave it for another the next day. This thesis is written in a similar way to the one that I read books and texts, which is often a non-chronological one. I frequently find myself jumping back and forth between sections, switching places of paragraphs, interrupting mid sentence to start somewhere else. I encourage readers with a scattered mind to choose their own unique path through this document, while for those less adventurous the order presented should work fine too.

While I was spending time alone in my family's cabin in the woods last summer I realised that I was never actually alone in the forest. I spent my days with the trees and in the nights I found unexpected company while dreaming of glittering nets. The first section I wrote for this thesis was THE MYCELIUM AS NOT ONLY A METAPHOR. In this section I look specifically at the mushroom mycelium as an example of an earthly organism which functions very similarly to the rhizome as described by Deleuze and Guattari. This particular biological more-than-a-metaphor of the mycelium is used as a symbol for polycentric posthumanism, and with it I would like to attempt to unravel hierarchies and binary thinking inherited from recent western history. Mainly, I will examine the methods of science and the formation of our current worldview that has been inherited from the Enlightenment period.

The biological phenomenon functions not only as a metaphor for the social, but is itself social as well. In INTRA-ACTING WITH THE UNRECORDED I introduce the writings of physicist and queer theorist Karen Barad. More specifically I explore her agential realism, where she suggests that nature is discursive. I will refer to quantum physics as an area of science that stretches beyond the reasonable into the realm of metaphysics, and through this I hope to restore a degree of respect and validation for unmeasurable phenomenon, such as spirituality, art and love.

One of the other effects of looking at the structure of the mycelium is the loss of what I refer to as centralized brilliance. In ME OR THE OTHER, WHO CARES I am trying to move the focal point away from the concept of the single creator. I seek to prove that the creation of an invention, idea, concept or artwork is never from one single source. I will engage with the concept of Agential Realism, applying it to the creation of art, thinking about the artist as a mere catalyst.

In the last section WAYS OUT/IN/BACK/FORTH I try to imagine an alternate future. Finding myself in what often appears to be the residue of a slow apocalypse, I attempt to discover new hope in what might follow. I want to reinforce the sense that people are not machines, but beings of love and care.

Perhaps at some point every artist or other type of creative maker asks the question "Why am I making art?" The world is already filled with so many things, there is already so much art that I enjoy. Does the world really need me to make more? Do I really need me to make more? As a young unestablished artist surrounded by other young unestablished artists whom I honor and appreciate it has been helpful for me to think of art as being needed to be made, regardless of who is making it. Just as the world has to become itself and is doing so through all of its many inhabitants, human and non-humans working as agents of construction, my art has needs of its own. And it is simply to be aided and enabled. I paint for this reason. To enable a painting. It is a need and a responsibility. And when I do so I try my best to allow my rational mind to rest and to trust my connection to another place. A source greater than me, the collective source. A leading scientist once referred to the mystical quantum mechanical phenomenon of entangled particles as "spooky action at a distance." He thought of the theory as nonsensical, believing the result must have derived from a lack of knowledge. I want to know what it means to believe in spooky action at a distance: both seriously, using all our intellect and critical thinking, and sincerely with all our hearts and sensing body parts.

Remedios Varo
Personaje
Oil on Canvas, 1961

An Armour with a Touch of Love

Remedios Varo was a surrealist painter born in Barcelona. She escaped the Spanish civil war to Paris, and was later forced to leave there too due to the German occupation of France. She took refuge in New Mexico, in the southwest of the United States where she ended up living the largest portion of her life. She was of great importance in the forming of the surrealist movement.

Let us look closer of one of her paintings, titled *Personaje*. The figure wears a knight's armour from the legs and down. Despite this protection he is open. His transparent gown is unfolded, allowing us see right into his bubble belly. He is steady, determined-looking. Yet he is so, so tactile. A thousand little nerves are reaching out around him. It seems the armour is made up out of them. It could be hair, or nerves or electric currents. It immediately pulls my thoughts to the mycelium.

In common understanding a mushroom is a cute little thick stem with a hat on it. In biological terms this section is just the tip of the mushroom. The mushroom's system of roots is called the mycelium. More often than not a mushroom is made up of mycelium without its tip. Perhaps you have heard this one before: the larger part is under ground. In fact, the world's largest organism by size is a mushroom mycelium.[1] I find this specific organism particularly intriguing. It is a highly functioning organism, yet it is not organized in a way we are commonly familiar with. It has no nerve center, no individual organs, no bodily hierarchy. Think of a dove; a dove can manage to get along alright with a damaged foot, but if it loses its head it does not have much of a chance. This same principal goes for most animals. As long as you don't pick the top leaf of a basil plant it will continue to flourish and grow while you strip it of its other tasty leaves. It seems as though many living organisms in nature are relatively geometrically organized and it is easy for the human mind to notice patterns and make assumptions; the important parts are

[1] Located underground in the Malheur National Forest. Oregon. US it covers almost 10 square kilometres, and has an estimated weight of 600 000 kilograms. Beating the heavy record of the blue whale who weights up to about 180 000 kg. Anne Casselman. **Strange but True: The Largest Organism on Earth Is a Fungus**. Scientific American. October 2007. https://www.scientificamerican.com/article/strange-but-true-largest-organism-is-fungus/ Accessed Mars 2019

placed high up and the heavy parts are down, wet is on the inside and dry faces the air, cute is fragile and big is slow, etc.

Looking again at Varo's fierce knight we might observe what is visible in the belly. It appears to contain a pair of legs, seemingly belonging to the same figure. Perhaps this is its true form, naked and transparent. And look, he is a she. The legs in the bubble belong to someone free, running barefoot with a dress dancing around her knees. We generally recognize armour as a form of bodily protection, and judging from the expression and pose of the knight, she seems very safe indeed. Her armour however, does not appear to be made of hardened steel. Rather it is soft, as if comprised of thousands of little arms that can feel and sense. How empowering and securing it would feel to have an extension of one's own senses, reaching out in all directions, touching and being touched. Learning and understanding by sensing in a multitudinous way. Catching subtle currents in the air, in the smells, in the sounds, and in the vibrating matter. Just like the little mushroom's roots does with its underground network of tiny tubules. The mycelium spreads out intricate and wide, often across an entire forest. It knocks on the little tips of a tree's roots. "Can I connect?" "Yes," a smart tree lets the fungi attach. A web of information for all trees connected to access. The mycelium is to the forest what a nervous system is for a body.

It happens that one in the middle of the night wakes up in despair because one is convinced that her arm is falling off. The muscle tissue dissolves at a point just beneath ones shoulder. The heavy bone inside the arm pulls the arm down. weighing it from its joint. detaching. veins are snapping. The skin gets all gooey and stretches out. only to finally rip in two. Gravity is keeping the arm limp and still at it's spot on the sheets. A puddle of blood grows around its open end. The nerves are the ones still working. telling your all this. Sending sensations back and forth. Tiny tubes connecting the area from the fingertips throughout the arm. across the space between the arm and where it used to sit. into the flesh again and out through the body and up towards the nerve centre. Flash and tingle when they spam your mind brain with electricity. The horrible sensation is waking you up. only to realize shortly thereafter your have been fooled. and your arm is still there where it is supposed to be.

Can't See the Forest for All the Trees!

When a tree in the forest loses a branch, it cries. In his romantic nonfiction book *The Hidden Life of Trees* forest guard Peter Wohlleben teaches us about the shrieking sound a trees makes when it fights a hard wind, or experiences a tough drought. He explores how phenomena like these are in many senses not far from the cries of a human or non-human exposed to a similar hardship.[2] The branch of a tree will grow back if broken, or if damaged its wound will heal with new bark. Remarkably, even if an entire tree snaps and falls to the ground it has can grow back up again. The same cellulose will not magically reform into a new trunk of course, but the individual tree can be reborn in a sense. The inherent knowledge of the tree can be retained. Its ghost is spread out under the ground of the forest. The knowledge of the forest, or the mind of the forest, is decentralized, it is distributed throughout miles and miles of fungi mycelium. The dreams and memories of an individual tree are kept in the roots of the others. And they love sharing their ideas and knowledge. After carefully observing the forest he governs, Wohlleben realized that an injured or chopped down tree is a big loss for the entire forest, the surrounding trees immediately put their own needs aside to strengthen the weakest among them. "A tree can be only be as strong as the forest that surrounds it"[3] he writes. They send water and nutrition and protection to those in need. They selflessly offer their help, spreading out and sharing their common resources, until the weak tree is finally back on its roots again, much to the other trees' great joy. They know that this tree, now strong, may someday return the favor. Wohlleben: "An organism that is too greedy and takes too much without giving anything in return destroys what it needs for life." [4]

[2] He quotes the scientist who discovered the phenomena "...a purely mechanical event and it probably doesn't mean anything." and continues to argue that if we were to look through a microscope on humans making sounds it would not look much different: air passeging pipes causing vocal cords to vibrate. **Peter Wohlleben, The Hidden Life of Trees: What They Feel, How They Communicate – Discoveries from a Secret World**. English translation by Jane Billinghurst (Vancouver: Graystone Books, 2016) p. 48.
[3] Wohlleben, **The Hidden Life of Trees**, p. 17.
[4] Wohlleben, **The Hidden Life of Trees**, p.113.

Isn't it beautiful. isn't it obviously simple? Why does this sound so familiar. like I have experienced it in a dream? Or in a fantasy. Or in moments of total clarity. When I believe in the whole. when I believe in karma and when I see every little link between every little unit. Between us. each other and further others.

The thickest part of a tree is its trunk. The trunk is full of nutrients and water. It is the center of the tree, surrounded and protected by its branches and crown. The trunk splits and bifurcates while still growing higher and thicker. It branches off into thinner parts which then too branch of, creating a fractalic pattern. Big comes first and smaller follows. It's an appealing model, we see it everywhere, and apply it everywhere. *Arborescent*, from the Latin *arbos* meaning tree, is a term for this type of ordering of things.[5] This is how we tend to understand a family tree, evolution, economical structures, and ownership - just about any concept that includes more than one component developing over time. It makes me wonder how much our conception of things is coded according to the same order. But there are other orders, and today I see a need for us to acknowledge the alternatives. Donna Haraway: "I want to know how to help build ongoing stories rather than histories that end. In that sense, my kinships are about keeping the lineages going, even while defamiliarizing their members and turning lines into webs, trees into esplanades, and pedigrees into affinity groups." [6]

Human - the Self Assigned Hero

Where did we ever get the strange idea that nature - as opposed to culture - is ahistorical and timeless? We are far too impressed by our own cleverness and self-consciousness... We need to stop telling ourselves the same old anthropocentric bedtime stories.[7] [Steven Shaviro, Dooms Patrol]

We've been so turned on by ourselves lately! In the last few hundred years or so we have adopted the perspective that humans rose up from the dirt and took a big leap out from the structures of nature, away from the other species. From this heightened vantage point we can look down with superior control. We were so to speak *enlightened*. This is how I personally learned about the world, and it stings a bit, but it is liberating to step down from our supposed throne. Assuming our

[5] Gilles Deleuze and Félix Guattari, **A Thousand Plateaus: Capitalism and Schizophrenia**, English translation by Brian Massumi, (Minneapolis: University of Minnesota Press, 1987)
[6] Donna J. Haraway, **The Haraway Reader**, (New York: Routledge, 2004) p.1.
[7] Steven Shaviro, **Dooms Patrol: A Theoretical Fiction about Postmodernism** (London: Serpent's Tail, 1997)

ancestors had a slightly more holistic world view then the common modern westerner I would like to point out that since industrial revolution the focus has moved towards an even more narrow perspective, towards the individual. A leap away from the other species, but also away from each other. What is our general conception of intelligence? What is our general conception of knowledge? Let us think of how we visualize brilliance, visualize truth and visualize an idea. Can you picture an idea, how does it look? Perhaps like a little beaming point of light? Like a golden dot inside the brain of a human? Perhaps I can even stretch it as far as a little dot of light in the brain of one of the old dead white males.[8] This idea of centralized brilliance must have come from somewhere.

Monotheisms are centralizing. They are all about that one God who had sons who had sons who had sons. In Christianity, it is generally accepted that this central, singular God basically looks like a big dad. With Sigmund Freud and his influential psychoanalysis, the male protagonist and the father as the anchor point of the family are established as given truths. In the economic realm, the central banks are a rendering of a similar phenomena. Smaller transactions are not made directly between individuals, but always handled and governed by a centralized third party. Just as we have the concept of the human in the centre of nature, we have the brain in the centre of human, an authority in the centre of a society, a company over its subsidiaries, a boss over a company, and so on. We are told that we of course need central banks in centre of our economy, and so it keeps on bifurcating. We have been doing things this way for so long that it sounds ridiculous to point it out. This is the law of nature, the order of things. Isn't it?

Touching downwards

Leaving the arborescent above and digging our way back into the soil, we reach the roots of our brilliant trees. Here we might find an alternative model, something like the *Rhizome*, as coined and described

[8] The expression is referring to a disproportionate academic focus on historic contributions and to Bernard Knox, **The Oldest Dead White European Males**, (New York Times, 1992) where the history of this canon is outlined and defended.

by French philosophers Deleuze and Guattari in *A Thousand Plateaus*.[9] In biology, a rhizome is the non-hierarchical root system that provide nutrition for one or many plants spread out over ground. A rhizome does not have a beginning nor an end, the narrative depends on your perspective, on where you look from within it. It cannot die due to local damage, because there is no part of inherent greater importance. A rhizome has a constant ability to adapt according to its surroundings. Lastly, it is a heterogeneity, meaning a very small root can be linked directly to a big one. Deleuze and Guattari utilize the term as a metaphor for an alternative socio-political structure. The concept of the rhizome can be viewed in opposition to the more binary, hetero-linear and geometrically ordered structure of a tree and its branches or roots. The structure which they accordingly name arborescent.

A Thousand Plateaus was first published in 1980, but it is perhaps even more relevant now than when it was first released. Obviously many major global changes have occured only since the 80s. The emergence of the Internet, increasing globalisation, and digitalisation have enabled connection between small as well as big nodes. Post-humanist theory such as Donna Haraway's has enabled us to think differently about our role as humans. What Deleuze and Guattari picked up from biology and used as metaphor for the social, Haraway speaks about as interlinked. When Haraway considers non-hierarchical *friendships* between species in *When Species Meet*, the dog is included in the social.[10] In *A Thousand Plateaus* Deleuze and Guattari give the intriguing example of the orchid and the wasp. By visually resembling the wasp, the orchid becomes part of the wasp's reproductive apparatus. The two different species, representatives of both the animal and plant kingdoms, are active participants in an interdependent symbiosis. The philosopher duo are not ecologists, their examples from nature function as metaphors, but today post-human studies such as Haraway's and Barad's function in a cross-disciplinary manner. A division between the social and natural is harder to obtain.

[9] Gilles Deleuze and Félix Guattari. **A Thousand Plateaus**. p.6.
[10] Donna J. Haraway. **When Species Meet**. (Minneapolis: University of Minnesota Press. 2007)

I believe that if Deleuze and Guattari were alive today they would be very excited by the new findings about the life of trees. As it turns out, trees communicate in a rather rhizomatic way. Their communication is not limited to close relatives, nor even to their own species, but extends to trees of different species as well. Furthermore, this communication is done by engaging with a completely different type of organism. Ironically, one could say that not even the trees are organized in an arborescent structure. Ecologist Suzanne Simmards has conducted research surrounding tree's interconnectivity with each other and co-dependence with mushroom mycelium. Simmards discovered that two different species of trees; the Birch and the Douglas Fir, were sending carbon back and forth to each other.[11] By feeding an isolated tree with radioactive carbon (above ground) she could trace the same carbon, and detect it showing up in another tree. Not only carbon was transferred, but other substances were discovered to be sent back and forth between the two individuals. Water, nutrition, and even important information like warnings about predators were shared between the trees. The trees seemed to be communicating to each other about their individual needs, and sharing with each other accordingly. Simmards' on-site experiments revealed that the two different species of trees were communicating via slow electrical impulses in the tiny tubules of a third species, the mushroom mycelium.

This is a perfect example of an interspecies relationship. A friendly symbiosis. As mentioned before the biggest organism of the earth is a mushroom mycelium, it is the biggest unseen governor in the forest, a master of distribution. Yet what we humans see when we visit a forest like Malheur National Forest is the trees that the mycelium governs, above ground they rise proudly. It is easy to be impressed and forget the collective when confronted with a marvellously grand tree. We tend to identify them as strong and solitary individuals, when actually they are part of massive, largely unseen team stretching miles and miles, where the strongest is no stronger than the weakest allows it to be.

[11] Suzanne Simard. **The foundational role of mycorrhizal networks in self-organization of interior Douglas-fir forests**. (Vancouver: Department of Forest Sciences. University of British Columbia. 2009)


INTRA ACTING WITH
THE UNRECORDED
The ambiguity of an experiment, balancing on the ontological
seesaw and philosophy-physics or metaphysics

If quantum mechanics hasn't profoundly shocked you, you haven't understood it yet.[1] [Niels Bohr]

[1] Werner Heisenberg, **Physics and Beyond** (New York: Harper & Row, 1971), p. 206.

Almighty Atomism

In the previous section on the mycelium I attempted to communicate that the arborescent structure can be found in many sectors of society. The world of natural science has its own rendering of this concept. Einstein's atomic model describes how everything is built up of small building blocks, which consist of a heavier nucleus of protons in the center encircled by lighter neutrons and electrons all governed by the force of gravity. In the 17th century Isaac Newton more or less laid the foundation for our entire present conception of the physical world. Newtonian physics are synonymous with classical mechanical physics, if your calculations do not work with his equations you can be sure you have done something wrong.

What I argue is that what we have learned from mechanical physics has been mirrored in our social and political lives, which is that the body that has more weight pulls lighter objects. It is easy to forget that monotheistic religions, capitalism, Freud, Darwin, Einstein, Newton and all the other old dead white men haven't always been around to impose these "classical" orders.

I realize that it might appear a bit far-fetched that I place the dynamic of a family with the father as an anchor point beside the phenomena of an atom with smaller electrons circulating the bigger proton nuclear. If I believe that the order of the family is not objective and naturally constant, but highly socially constructed, am I then suggesting that an atom is as much of a social construction as well? It is indeed silly to imagine an atom being a victim of cultural perspectives. Or is it?

I am trying to remember that I am not a physicist, neither classical nor quantum. But I do understand that from the moment we gained a greater understanding of these little guys called atoms, many things suddenly seemed to make more sense. And for a pretty long time it has looked like this could cover everything. If Einstein would have succeeded in achieving his *theory of everything* that he badly wanted within the laws of Newtonian physics many questions would have been answered, but there was one thing that appeared as a real itch in his eye. This thing made

little sense, way too little sense in relation to everything else. He called it "spooky action at a distance." [2] Also known as superpositions, the phenomenon refers to two entangled particles dancing in synchronization without any geographical proximity enabling them to effect each other's behaviour. It has to do with quantum physics. Perhaps his nickname was an attempt to humiliate something that he thought of as nonsense. History tells us that Einstein is no longer with us, but spooky seams to spook on.

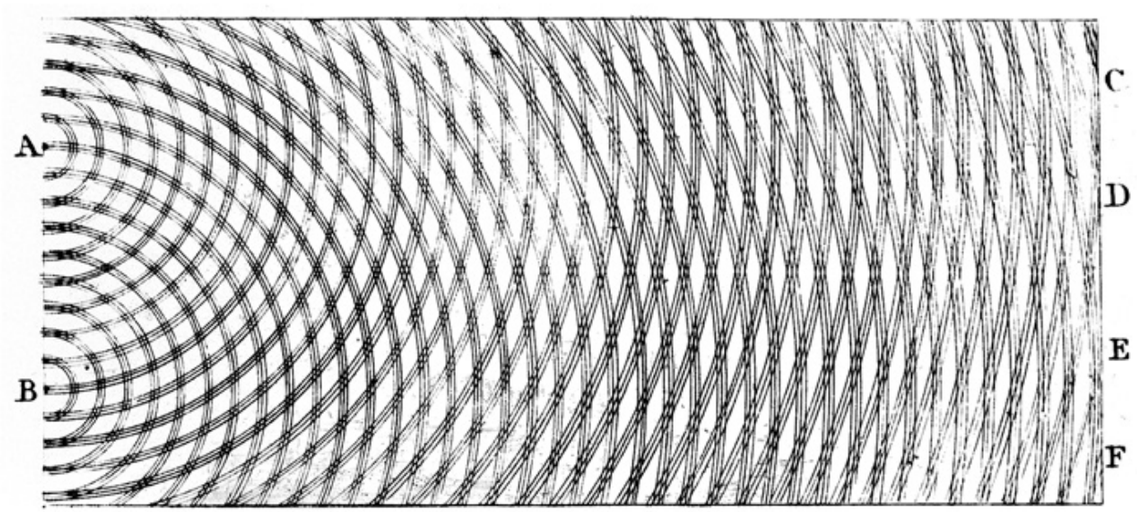
Double Trouble

In this chapter I will introduce physicist Karen Barad's *Agential realism*. To make Barad's argument clear I think it could be helpful to clarify an experiment as an example of a kind of apparatus that she and I will be referring to moving forward. The double-slit experiment is a fundamental experiment. Following its arrival the world of physics forked off into classical (mechanical) physics and quantum physics. The experiment demonstrates the wave/particle duality.

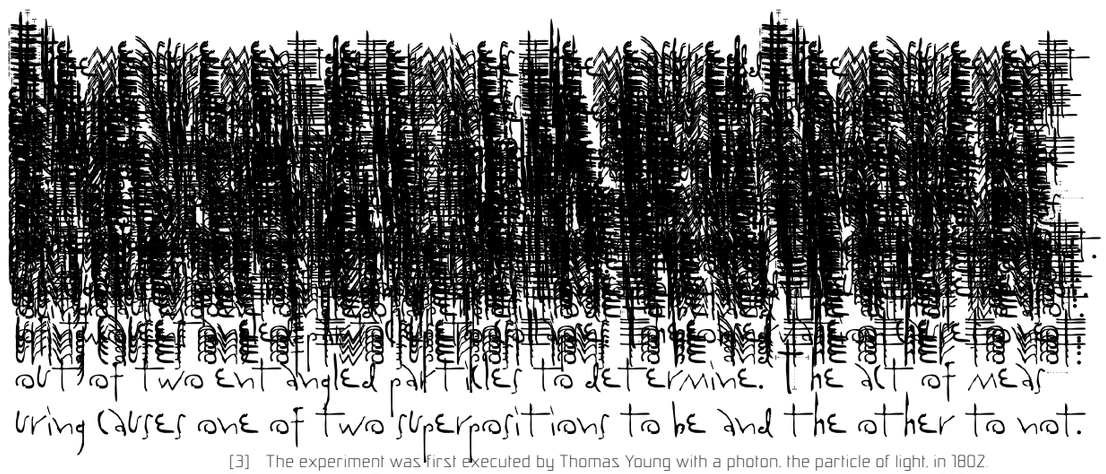
A particle is sent out towards a light sensitive screen. Between the source and the screen there is a wall with two slits. If light behaves like particles the screen will react on each side of the screen, right behind the slits. If light behaves like a wave an interference pattern will occur on the screen due to diffraction. A wave enters the two slits simultaneously. The remarkable thing is that the photon behaves sometimes like a particle and sometimes as a wave, depending on small changes in how the experiment is executed. If only one particle is sent out and we put a detector on the wall we will see which one of the two slits the particle passes through, and moreover it only leaves a mark on the side of the screen behind that specific slit. When the light passes through both slits, like a wave, a clear interference pattern occurs. Now, if we only send out one photon at a time, but without any detector on the wall, the interference phenomenon

[2] John Bell. **Speakable and unspeakable in quantum mechanics: Bertlmann's socks and the nature of reality**. Bell says: "Einstein had no difficulty accepting that affairs in different places could be correlated. What he could not accept was that an intervention at one place could influence, immediately, affairs at the other" [Cambridge: Cambridge University Press, 1987] p. 143 p. 144

remains. This shows *self-interference*. If you try to investigate which of the two slits the light passes through, the interference pattern is destroyed. The light may have wave or particle properties, but not both at the same time. It is only determined which after you measured it in that manner.[3]



[concept illustration of wave interference, creating a diffraction pattern]



[3] The experiment was first executed by Thomas Young with a photon, the particle of light, in 1802. Physicist Louis de Broglie presented his thesis concerning the wave-particle duality theory in 1924. The theory was confirmed by Davidson and Gerver in 1927, who then succeeded the experiment with an electron. Later scientist has succeeded the experiment with just about any elementary particle.

Introducing Karen Barad

Karen Barad is currently a professor in feminist studies, philosophy and history of consciousness at University of California, Santa Cruz. Her own studies include quantum physics and queer theory and her research raises questions within ontological and epistemological philosophy and the feminist science studies. She is particularly notable for her book *Meeting the Universe Halfway*.[4] What I have gained from reading this fairly dense and wide-ranging book is not only a broader understanding of the non-understandable world(s) of quantum physics, but perhaps more importantly, how learning about quantum physics could be a key for the undoing of the absolute and deterministic orders by which many of us have been understanding our reality up until now. Barad is keen on stating that she does not want to be misinterpreted by new age looneys, not to have her research become fodder for pseudoscientists. I was stunned to read this, but will still take the liberty of using her writing in my artist-doing-science thesis.

Agential Realism

In her book Barad lays out her agential realism. It is as real as realism, but not quite as definite. It is not within agential realism to ignore hard facts and measured data by solely referring to the ambiguity of the apparatus, to the experience and the experiment. Believing and dealing with the material, physical and actual world is what makes up the realism in the term. But the fluidity of that material world, the constant flux between states, is what makes up the agential.

The word Agent means "...force capable of acting on matter, ...something capable of producing an effect, person authorized to act for another, ...to drive (cattle), ride (a horse), be in motion, do, perform, transact..." [5]

[4] Karen Barad. **Meeting The Universe Halfway** (Durham and London: Duke University Press, 2007)
[5] Online Etymological Dictionary **Merriam-Webster**

Barad writes about two influential theorists of performativity, namely Michel Foucault and Judith Butler. Butler's focus is on and around the bodies and identities of the human, and how the two come into to matter. More specifically she is focused on how gender is constructed. Her theories partly derive from Foucault who claims that societal institutions occupy the power of shaping identity. Both mean that the identities of bodies are never predetermined, but rather are effects of social constructs. Foucault and Butler both speak about performativity only within social discourses.[6] Nevertheless significant, since it shifted the prevailing view of the nature of human identity toward something slightly more fluctuating, perhaps very much because of their influence. To me it seems that philosophers unavoidably end up on either end of an ontological seesaw. Representationalism vs Realism, Idealism vs Materialism, subject vs object. Both of the mentioned thinkers lands on the Representationalism end of the seesaw, but they do not touch upon performativity as anything other then the metaphysical, the social. They do not speak about performativity of matter as in physical matter. This is where Barad takes performativity a step further. The Danish quantum pioneer Niels Bohr emphasized the entanglement of thought and matter. He coined the term *philosophy-physics*, finding the two schools to be inseparable.[7] Could Bohr be placed on either or side of the ontological seesaw? Referring to Bohr's philosophy-physics Barad introduces performativity in her agential realism. Agential realism looks at matter as physical and actual, but without ignoring its performative aspects. This means that it is not only our view of physical matter that is being shaped by our experience of it, but the actual matter itself.

When Barad speaks about materialization she is indeed speaking about the physical, real molecular constellations making up earthly elements that in their turn make up things. But due to the ambiguity of the apparatus the physical in itself is discursive, and hence onto-epistemological questions are deeply entangled with nature. This meaning, not only entangled in its traditional sense as in how it is describing nature, and being a tool to understand and measure it. Onto-epistemology is hence one discourse

[6] Karen Barad. **Meeting The Universe Halfway**. p.150.
[7] Karen Barad. **Meeting The Universe Halfway**. p.97.

for the co-making of nature. McKenzie Wark has in his book Molecular Red explored Agential Realism:

"Objectivity means producing a certain kind of cut in the world, over and over again, and getting comparable results. But the results are always a product of a particular apparatus, which makes this cut in the world in a particular way. What is measured is not the world, it is rather the phenomena produced in this particular apparatus. Actually, this approach is more, rather than less, "realist". It's a realism of the experimental medium itself. ... We can't subtract the practice of measuring from the phenomena measured. But the larger consequence is that there is no good way of discriminating between the apparatus and its object. No inherent subject/object distinction exist. There is an object-apparatus-phenomena-observer *situation*. The experiment itself produces the cuts which makes these appear to be separate things." [8]

Intra-Action

Barad uses another term of her own, *Intra-acting*, an alteration of interacting. The word inter means *around* or *in the midst of*. Interacting suggest the separability of individual parts. Intra means from within. Suggesting that the two intra-acting parts are as well already part of each other in their own becoming.

As I understand it, intra-acting implies the necessity of a perceiver of the matter in order for the matter to come to matter. Nothing is anything without its relation to something else. Materialization requires both a perceiving and acting agent. This does not mean that meaning *makes* matter. Meaning prior to matter entails that meaning is set and determined, that there are certain predetermined rules and values that nature is enslaved to follow. Barad is not concerned with that. Here the need for a co-dependence dialog and intra-action with the perceiver is present. As I understand, it is especially important to recognize that the perceiver

[8] McKenzie Wark. **Molecular Red** (London and New York: Verso. 2007) **Science and Utopia. Cyborg Donna Haraway: Technoscience** p.157.

in an intra-action is not necessarily one that is aware, in the traditional sense. There is a need to dismantle the anthropocentric idea that the human alone has the capacity to create meaning, and hence be a co-producer of matter in an intra-action with it. Previously when talking about the egg-or-hen question of the world or word dilemma, non-human agents have not really even been considered because they simply don't have "words". Ontology and epistemology have been an exclusively human affair.

When most humans think about these measurements we think about the measurer as being a human. As far as we know we are the only ones who have done quantum experiments and other types of, perhaps, more general measuring. We do not look at results derived from experiments executed by monkeys or by trees, for (un)obvious reasons. Barad speaks about brainless knowers. I assume she is thinking about something like the brainless slime mold *P. polycephalum*. It made a bit of buzz in the science world due to its surprisingly high level of intelligence. The slime mold has ability to move around, solve simple problems, and remember paths. Yet it is a brainless creature, neither animal nor plant, a sort of mushroom - an ambiguous life form, and a hard nut to crack for a classical evolutionist.[9]

[9] Ferris Jabr. **How Brainless Slime Molds Redefine Intelligence**. Scientific American. www.scientificamerican.com/article/brainless-slime-molds/ . November 2012. accessed Mars 2017

This is how one should meet people and things. Befriend your enemies. Everything you encounter. try to meet it halfway. This is how we can progress. or at least become anything other then what we already are or were. For better or worse does not exist. There is life and movement and it happens only when you take a step towards one another. Be it better. be it worse. It is and is preferred by most over isn't. When you have a conversation become your conversation partner and let them become you. The point you will make together will appear above your joint heads. When you listen to a song. make the song with your ears. now you will hear the song clearly. And the song will be held by your ears. When you hold an object. put it inside your hand. Not on but under the skin. and put your hand inside the object. Attached to your arm is now a hand object. And from the hand object your arm is growing.

Agential Realism, onto-epistemology, and the notion of an apparatus are all concepts not commonly found in your weekly science magazine. They demand some extra attention to wrap one's head around. But it is in times such as these that they might become helpful in our further making of our world. We have a new need to refine our methods of knowledge production, to examine the ruling methods of science. It has not always been the case throughout human history that we have been in need of abstractions of the concrete and concretisations of the abstract, but it might be.

Science and Religion, Authorities of knowledge and truth

> Actual science, little by little, began working through an apparatus capable of registering sensations that extended far beyond scale and scope of the human. Science became not just a way of objectively recording what the subject sense: scales way below the molecular or above the solar system; times faster even than thought, or epochs billions of years before the perceiving subject - before this only life we know - existed.[10] [McKenzie Wark]

The means of the scientific method are observational. Human sensorial experiences, like seeing a colour or feeling a rush of energy, are explained by mapping the phenomena based on observation through an apparatus - a repeatable experiment with an isolated measuring device. While this process began by mapping the things we could readily sense, like an apple falling to the ground, the same method of using sense measuring devices has allowed us to measure things that are far beyond the capacities of our own senses. Suddenly our grounded and straight-forward means of observation have led us into a science that is actually pretty weird!

When learning about how illogical, irrational and chaotic the material world can sometimes behave it might be easier to consider ideas that have previously belonged to the realm of the abstract, metaphorical

[10] McKenzie Wark. **Molecular Red: Labour and Nature, Alexander Bogdanov: Workings of the world**. p. 21.

and non-real. In the past century spirituality and religion have been largely suppressed in the western worlds, for the better many might argue. Though some would point out that certain elements traditionally offered by religion have been missed; a common unifying belief system, a faith that gives meaning to life. While these have been lost, to some extent it seems they are being reclaimed again. We tend to search for substitutes, resulting in the formation of the new age movement for example. Others find fulfilment through consumption, if nowhere else. Capitalism has thus become our unified faith. At the same time today's science has reached a level of abstraction so incomprehensible to the common person and so dogmatic that it essentially resembles a religion. When we are not the ones executing the experiments or conducting the complicated research ourselves, our sense of reason is not enough to verify the facts that are dogmatically presented to us. Today we also must have faith. We need to believe in what we are told. Like once before, the two belief systems are moving closer to one another.

In his book *Against Method* Paul Feyerabend introduces the term "epistemological anarchism".[11] This concept exists in opposition to the ideas of Feyerabend's own teacher Karl Popper, and posits that it is impossible to develop a universally objective method of observation. I think it is crucial here mention that Feyerabend was active in northern California during the 1960's, a time and place where the bizarre findings surrounding quantum physics were just beginning to emerge and take up a more prominent place within the walls of institutional science. (Quantum theory had been around since the beginning of 20th century, Nils Bohr's atomic model was published in 1913, but after a sordid association with the atomic bomb, quantum science was tucked aside, awaiting a less politically charged milieu in which to reemerge.) Feyerabend was inspired by the irrationality of quantum physics. It was this inspiration, along with his critique of the ruling scientific method, the sole purpose of which is after all to fix facts, that led him to the concept of the impossibility of anything being fixed. He expresses that since anything is possible, in his terms "anything goes," that science should not be perceived as

[11] Paul Feyerabend. **Against Method: Outline of Anarchistic Theory of Knowledge** (London and New York: New Left Books, 1975)

democratic as western culture makes it out to be. Due to the lack of one universal method, and because "anything goes," there is no logical justification for valuing scientific claims over claims made by other ideologies, such as the religious or mystical. Science can just as easily be an oppressive force in a society rather than a liberating one, which is why Feyerabend believes that the state and science should be separated from one another, just as the state and religion are today.

For the majority of human history religion has played the role of the main authority over knowledge and truth. In the western world the division between religion and science occurred when the two forces were extremely polarized, making it virtually impossible, as well as a heinous crime to simultaneously believe in both. Religious powers wanted to obtain the truth and only truth. Perhaps a certain desperation to maintain the religion forced the church to become even more orthodox. The time around the turn of 17th century has come to be called the Enlightenment, or the Age of Reason. During this period "the first modern scientist" Galileo Galilei was making watercolour paintings of the moon based on telescopic observations.[12] René Descartes published *Discourse on Method,* laying the framework for the scientific method that we have been using up until this day.[13] At the same time Isaac Newton illuminated the fundamental laws of nature, setting the scene for basic physics.Everything was believed to have a reason, a cause and an effect. By exploration and ensuing discoveries the source of any mystery could be unveiled. This is the time when religion began to be put aside, where many thought it belonged, functioning only as a subsidiary for what was considered real learning. It remained as a form of tradition and culture. Today we find ourselves even further down this same path, both mentally and structurally. Though today multiple examples are emerging where modern science is proving the validity of ancient religious concepts. A number of ideas and methods were archived at the point that science took over the role as the main authority of knowledge and truth. We have reached a point where we might have "reasonable" reasons to return to some of these concepts.

[12] The drawings were made in the year 1609. David Wootton, **Galileo Watcher of the Skies** (New Haven: Yale University Press, 2010) p. 103-104.
[13] René Descartes, **Discourse on the Method of Rightly Conducting One's Reason and of Seeking Truth in the Sciences** (Paris: 1637)

What to make of all of this?

During the past decade, technological progress in experimental physics has opened up an entirely new empirical domain: the world of "experimental metaphysics." That is, questions previously thought to be a matter solely for philosophical debate have been brought into the orbit of empirical inquiry. This is a striking development because it allows scientist to explore metaphysical issues in the laboratory (so much for the category "metaphysical").[14]
[Karen Barad]

Does the ambiguity of the apparatus give us a chance to defend the nonsensical? The *other* things, the things that large groups of sensible agents *know* - yet are unrecorded, uncategorized, and hence "unreal". A dry rationalism is directing our idea of the world. Would leaving this behind mean creating a risk of entering a delusional light show with hectic strobe light and shadow games? I don't know. Could it be that we are living in a bright world, illuminated by knowledge? But could the light of reason be too bright, making us blind to all else? What about the unmeasurable? What about metaphysics? What school teaches these concepts? Let us look at the metaphysical concept of love for example. What is love? Is it pheromones? Is it electrical impulses? Is it the reproductive instinct? I say love is none of those things, love is love and it is as real as any *thing*. Many of us *know* this, yet it is not *true* per definition within our common belief system. The brain is a brilliant part of the body, but it is not the only thinker on board. Feet, stomach, and heart also have their say. Furthermore, thinking is not the only activity going on in these parts.

[14] Karen Barad, **Meeting the Universe Halfway: The Science and Ethics of Mattering**, p. 35.


A dream of an end to the single mind's creation,
making as being a catalyst for something else

I do not wish to talk about myself because I hold very deeply the belief that what is important is the work, not the person.[1]

[Remedios Varo]

Leonora Carrington
The Burning of Giordano Bruno
Oil on Canvas, 1964

[1] Janet Kaplan. **Remedios Varo: Voyages and Visions** [**Woman's Art Journal**. Vol. 1. No. 2 (Autumn, 1980 - Winter, 1981), p. 13-18

A Painter as a Catalyst

Leonora Carrington was a british surrealist painter operating in New Mexico. Together with two other like minded surrealist artists; Remedios Varo, whom I have mentioned earlier, and photographer Kati Horna, they formed a friendship and worked side by side. The women were occasionally referred to as “the three witches”, all three being inspired by the occult and subconscious.[2]

I am looking at Carrington’s painting titled *The Burning of Giordano Bruno*. What is going on on that shining white goats head? There is the devil. There is the purple head upside down, hovering next to the bowing lion. There is divine shapes, sacred geometry. Symbols I recognize as the flower of life and the egg of life, and it has little eggs growing inside it! There is also a beaming black hole and there is a bubble with a schizophrenic face. There is a piece of furniture with hands as feet. It seems to me that the narratives have popped up one after the other onto her burning canvas. I can imagine that when Carrington started painting this painting she did not have a clear image of the result visualized in her head. This is a vibrating potpourri, an assemblage of ideas and symbols. I think this might be what happens when a painting is allowed to be painted by itself. Nevertheless with the help of a skilled artist.

I would like to think that a liberated artist sees herself as co-maker in the making of her art. The whole act of becoming the artwork is what makes the art. And it is an act done by many compounding actors, the artist being only one of them. The material being another, her surroundings a third, etc. An uncountable number of variables are involved. In this way, I would like to meet my own works of art halfway. Just like a witch who is not the creator of magic but a mere user of it. A catalyst is an enabler, a substance or a person or a thing that causes activity between two or more entities without self being effected. These artists were adept catalyst of the unseen and fugacious world. A world that did not herein from only within their own selves. As I am thinking about this I

[2] Rebecca Seiferle. Edited by Rebecca Baillie. **Remedios Varo Artist Overview and Analysis**. TheArtStory.org. 2019. https://www.theartstory.org/artist-varo-remedios.htm. Accessed Mars 2019

remember someone from my childhood. I would like share with you a personal memory, that eventually will take us somewhere slightly unexpected, namely the tech industry.

The Craft of Our Time Castrated by Patentship

My childhood friend always had a very developed sense of style and identity. When we played together we were reflecting the grownup world outside, with all its inherit characters. She grew up in Florida and watched a lot of tv so she knew the about the world. I learned and adapted. We were two little anthropologists. When it came to trends she was always the first one to pick them up. When she was flickering through fashion magazines she found them full of ideas that she had already had, she said. One time she drew an imaginary catwalk look for the brand *Viktor and Rolf*. Two years later the look showed up at their very own catwalk, to none of our surprises. When she thought she had started this or that trend I was supportive and truly believed her, and still do. But how come I can believe that a 14 year old girl in the suburbs of Stockholm who did not have more visibility then a blog with at most 60 followers could have had such influence over the fashion industry? The answer is that I believe that it is just a simple example of the work of our collective consciousness. She may have been first but so were thousands of others. Simultaneously. Unspeaking. Connected. Unfortunately does this idea not rhyme with reality, in many people's opinion.

I find it useful here to think about the forming of an idea or a concept, like a trend, in the term of emergence. Emergence is a natural phenomenon that occurs when a number of components operate together, producing a richer result collectively. Examples of emergent behaviours in nature is ripple pattern in sand dunes, the ways of a flock of birds, termite cathedrals or a school of fish moving in tandem. It can be predictable or not at all, intended or unintended. The new outcome have properties that typically can not be found in the individual parts that it consists of. No one in the group is first, no one is last. There is no smarter or dumber way. Whatever shape the group might form they formed it without any order of priority.

Collective ideas are harder to trace, to source, to categorize and to capitalize on. It is harder to record and prove and hence harder to believe. I find it grateful to analyze this idea through a certain practical field, namely the modern technological development.

Watch me. I am sitting in a prehistoric village and I am carving the shape of bear out off a block of marble stone. I sit here and do this for a bunch of hours and then I scribble down my name under the bears paw. Now you will all know who did all this work. Say it turns out that in a nearby village some other lad carved the same thing. He scribbled his name under his marble bears paw. Good move. otherwise I could try to trick the merchant into believing that I am the creator of the two marble bears and not only my own. It seems fair we both scribble our names on our own bears paws. Watch me now. I am in a present day village. and I am carving the bear out of a marble block. This time I scribble my signature not only on the this bears paw but also on all marble bear paws that will ever follow. by default. regardless of by whose hands it was carved. A step even further into this fulfilled future is that I may even. if I afford. put a scribble on every possible marble bear paw that may or may not come. before I even have one coming myself. That means that no one else than me may take credit from the possible becoming of any marble bear. It just may not appear from elsewhere. It does not matter what the other lads might be carving. or what they were already done carving. sitting on their chambers in the neighbouring villages. The first to claim it owns it.

Since a time back we have been putting signatures on what we make, and since a more recent time back we have been putting signatures, watermarks, copyrights on not only finished artifacts but also on pure ideas and concepts as well. This behavior of taking credit for non existing things has been made possible after a conceptualization and capitalisation of the material world. In the post industrial era, materialization or *hands-on making* is no longer seen as the more labor exacting process in a production, and hence not valued as the labor of greater importance. It is either a careless machine, a careless worker or a careless machine-worker by whose hands the artifact is brought into matter. Meanwhile the care of the artefacts is passed on to the designer, manufacturer and orderer. Today these agents are seen instead as the real producers. This detachment has had us steer away the focus from the product towards the producer. From the art to the artist. Who is *he*, and why did he do this? How does he look in a hat?

A company that is actively using patenting as a method of stopping rivaling companies from developing products, or to get them into complicating litigations, is Apple. Apple files thousands of patents without the intention of actually getting them into production. Recently Apple took patent of some 3-dimensional body movements as an interface control of a technological device.[3] It can be something as simple as weaving your hand in the air to unlock a screen. Apple already has patent on a vast number of finger-screen movements. The slide-to-unlock to name a vital one. It is easy to imagine the frustration from any other new or old developer, who is forced to face a next level ingenuity. When the giant tech companies are using this method of calling dibs on everything they can think of, they are totally killing of the ecosystem of technological progression. Techs "The Big Five" - Apple, Alphabet, Microsoft, Facebook and Amazon, has become powerful governing forces. They are no longer only selling products. Ever since we, the modern human have become dependent on companies like The Big Five in our convenient lifes, they have become self fed. Like the angler fish that has a lamp on a stick on its forehead, Google does not have to do much to make us swim right into their gaping

[3] Rob Price. **Apple Just Patented 'Minority Report'-Style Gesture Controls**. TheBusinessInsider.com. January 2015. www.businessinsider.com/apple-gesture-control-patent-2015-1. Accessed Mars 2019

jaws. Their service is free of charge, we pay instead with our personal information. The fish grows bigger.

In the documentary series *Future Cities* we get to visit the city of Shenzhen, China. The "Silicon valley of hardware" holds the fastest developing technology in our present day.[4] What enables it is the open source hardware. Unpatented technological pieces and units are being selled in huge indoor markets, making it possible for anyone to purchase and puzzle together a prototype of their own new invention. There is no monopolisation of the intellectual property of a product, and it seems like everyone prefers it this way. Instead, the general development is the more important thing, rather than who is making and owning what. According to the documentary, around eighty percent of the products that are manufactured here will not get further than to the prototype phase and will not even leave Shenzhen. But the twenty percent that will wouldn't in that speed or even at all if it wasn't for the free laws around authorship. The innovation in this Chinese equivalent to America's silicon valley is driven by curiosity and need rather than competition. It is not hard to see a connection to the ideologies that the respective two superstates comprises, but let us not get into that now.

Preservation of the planet, sustainable societies, human rights and equality; those are some interests that one would wish our world rulers would obtain. The big road of capitalism have not only brought us to find ourselves stuck in doing labour for purely economic motives rather than any other motives, but also led us into monopolism. Natural development dies off as the big companies are buying smaller ones, as well as buying ideas. In this sense it is both inadequate and nonfunctional. Development should instead be driven by curiosity, ideology, love, care and local need.

What I wanted to talk about here is not necessarily how sad I am over the slowed down tech industry, I think it just happens to be the craft of our time. What I wanted to point out is the idea of authorship and its impact on our way of perceiving creation. The solid concept of a single

[4]]Director Jim Demuth. **Inside Shenzhen: The Silicon Valley of hardware**. Future Cities by Wired UK. July 2016

creator and authorship stands in the way of enjoying the experience of an idea come to life. To realize concepts becomes a competition, and no fun to watch if it is not done through one's own actions and for one's own profit. "I was first" is a bitter thought. But it is not only hurtful for the mind to resonate like this. In my opinion it is also ridiculous. "We were first", one should instead resonate. Or even "we were now". Because a trend is never a single humans creation. Nor is an invention, or even a work of art. It is solely a reaction of its surrounding, a mimic of its people. My childhood friend had looked at enough material to get a true sense of the identity of the brand Viktor and Rolf. Enough that she could generate the same idea as the designers themselves. That is what an artist must be. Less of a single maker and more of a means, a hand, a canal, a catalyst for bigger forces.

Quantum consciousness

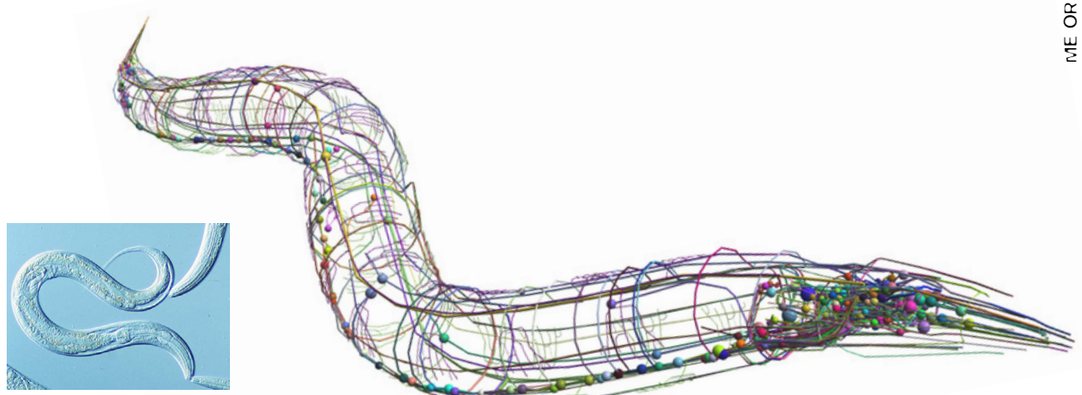
I think you can capture or simulate some aspects of intelligence through quantized methods. But you're always going to leave something out. You are going to leave the thing that you can't measure or don't know how to measure or are unmeasurable. That anything can be unmeasurable. That lately goes against one of the primary principles of science, which is that anything can be measurable. If you can't measure it you cannot do science about it. And that relates to objectivity and the repeatability of experiments. You have to have a measurer outside of yourself, by which to repeat experiments. Ultimately where I think we are gonna go is to realize the limitations of that kind of science, that way of knowing and the technology that comes from it.[1] [Charles Eisenstein]

A Singularity is a high mass point in space. In technology, the Singularity refers to something else. It is the dystopian scenario where artificial intelligence has reached the level of intelligence it demand to be able to reproduce itself, and consequently improve itself. When this point is reached there is no turning back, the destiny of humanity lays in the hands of the robots we created. This threatening theory of the near future has many followers. The Silicon Valley AI dreamboats foresee the course running out ahead of them. With his tech company *Neuralink* Elon Musk wants to put a computer hairnet on the brains of his cautious customers.[2] By upgrading our own computing, i.e. our thoughts, to a quantum speed we will have a chance against the robots when they come for us. That is the man's idea.

I think that as we are starting to understand machines and programs as if they were alive beings, we tend to treat people as if they were machines and programs. MRI brain scanners is the apparatuses that have replaced ambiguous psychology methods. Nowadays the patients psyche appears on a screen, illustrated as hard data. It appears measurable and factual. The visualized result resembles one you would get from running a virus scan on your computer. At the same time, algorithms have become far more complex than we can comprehend. Algorithms built on algorithms

[1] Charles Eisenstein, **FUTURE FOSSILS#85: Living in the space between stories**, podcast by Micheal Garfield, 2018
[2] https://www.neuralink.com/, accessed Mars 2019

built on algorithms is making it impossible for anyone to trace an origin. Not even the original coder of an algorithm cares to fully understand it. It has no point understanding it, as long as it does its job. Just like how the algorithms have grown autonomous and comfortingly ungraspable even for their own makers, the digital apparatus allows us, the originally sensing and emotional beings that we are, to understand ourselves based on information we did not receive through our own or other people's senses. The data is there regardless of how it came to the world, and by comfort we trust it.



[Microscopic photo of the worm C. elegans Worm and a Connectome, a Neural map of the same species]

The microscopic worm C.Elegance is a simple organism, nonetheless alive and active in its highest sense. It swims around in search of food, it mates and looks out for danger. The worms relative simple cognition, and the fact that it has a see-through body, has made it possible to map out a complete map of all its neural connections. The right image shows the so called connectome of the worm. Sadly, and surprisingly for many neural scientists, the artificial replica did not "live".[3] It did not move around like the original, despite having exactly the same level of complexity. Something seemed to be missing. Perhaps its ghost.[4]

[3] Ferris Jabr, **The Connectome Debate: Is Mapping the Mind of a Worm Worth It?** TheScientificAmerican.com. October, 2012 https://www.scientificamerican.com/article/c-elegans-connectome/ Accessed Mars 2019
[4] A reference to the movie **Ghost in the Shell** by Mamori Oshii, 1995. The main character is a cyborg cop called Major who is doubting her human authenticity. Wondering if she really has a **Ghost** inside. And if the villain, an AI called The Puppetmaster, has it too, which he himself claims. The word is used similar to how we use the word **soul**. It has become a key in the debate over the potential inner lives of AI.

DREAM JOURNAL:

Humanity was almost wiped out. The robots tried to take over. Google had a human body. She could enter the mind of the other humans embodied robots and some original humans too. like you and I. She had formed a strong fierce group of humanized AI's and some poor robotized humans. She had a black shiny bob haircut and a golden dress. She was charming. she looked like Loosey Deschanel. They were taking amphetamine all the time. Bikes were laying around everywhere. up for grabs. Desperate teenagers jumped in the mail van when it came. with the intention to hide in it and get away. end up anywhere else but here. All distances felt so long. The only good thing there was to eat was wild boar and tofu from the tofu fields. A friend got pregnant. She said she wished she could make a beautiful home. We set of on refuge. leaving Google Deschanel and her tempting glass and metal palace office behind us. Climbed over fences and crossed windy sunbleached fields. Her belly was covered with scratch marks. She was warm and naked and pregnant on the floor of the empty Vermeer museum. The walls were all enlarged Vermeer imitations. There were apples everywhere. We had crossed an apple yard to get to the empty museum. Fast forward a year or two. We were trying to make our Vermeer museum into a meeting place and restaurant. There is a little bit new hope in the world. I don't think the robots took over. at least not everything because we were fine. The baby is an octopus from waist down and it won't sit still in her happy mommy's lap. The child is talented at drawing. The moms friend said "I wish I could give you some oil paint. you would be talented with that too".

New Planet new hope

As a millennial, the ruling mentality of my fellows is rather cynical. We have been growing up in a crying world. A complete global mess. A pounding individualism has enabled us to follow our self-fulfilment dreams, for the price of a continuously dying mother earth who is being live streamed and documented from all her angles. It is impossible to miss, but tempting for many to ignore. It is a generally accepted conception that the earth and everyone on it is not in their best state right now, but that idea it is not a very old. Today we face fascism, war, manipulating companies, corrupt politics and a total mistrust of any information source. And the only one who is being liberated is Carbon Dioxide - into the atmosphere, as McKenzie Wark wittily puts it.[5]

Brener's floor pieces *Omni-Kit (menthe)* and *Omni-Kit (jasmine)* is made of glass and computer parts. Though it is a physical object, its optics remind me more of the kind of artifact found in the rendered world. To me it looks like something from a near future apocalyptic video game. I appreciate that this Omni-Kit is somewhat chic, with kitchy everyday plastic objects and flowers put together and sealed in a decorative way. The look of it tells me that we will have time to be cute and fabulous while fighting laser beams and death slimes. The future is terrifying but it is also chic. Consumers of today might want to choose some kind of hi-tech shield, or a handy multi tool like the one I feel Brener is referring to, over a slow preventive measure to any alluring problem. There seem to be an idea amongst us that the damage here is done and best is to find an antidote, rather than a vaccine.

[5] Carbon Liberation Front is an idea Wark has taken from Alexander Bogdanov who presents it in his science-fiction book **Red Star**, 1908. Wark says "...the mythic narrative of modernism is liberation: ... the liberation of people, the liberation of women, the liberation from slavery etc. But what if what we really liberated was not anything human at all? But what we liberated was an element, carbon, in massive quantities. From under the ground, we put it in the sky. What is the consequence of that liberation?" Interview with McKenzie Wark by M Cem Menguc, **Molecular Red, Labor after Nature** (1001 Plateaus, # 4) Youtube, December 2016, https://www.youtube.com/watch?v=0-kzmP0vrzM, Accessed Mars 2019

Amy Brener
Omni-Kit (menthe)
Urethane resin and foam, concrete, pigment, found objects
55 x 28 x 5 inches, 2017

Amy Brener
Omni-Kit (jasmine)
Urethane resin and foam, concrete, pigment, found objects
55 x 28 x 5 inches, 2017

In an interview, McKenzie Wark seems frustrated about the fact that people tend to think the term Anthropocene is synonymous with the Apocalypse.[6] The Anthropocene is a geological term made by geologists, he explains. It is not coined by any of the wide range of philosophers or writers who is using it. The Anthropocene is the geological era were human interference with earth has made major impact on its state. It is a recent shift and it is a big one. Unfortunately, as we all know, we did not changed the geological status of earth for the better. Man has been partying on earth and woke up to realize that it is not a hotel room we can check out from, we are at home. From now on we have to find new ways of inhabiting earth.

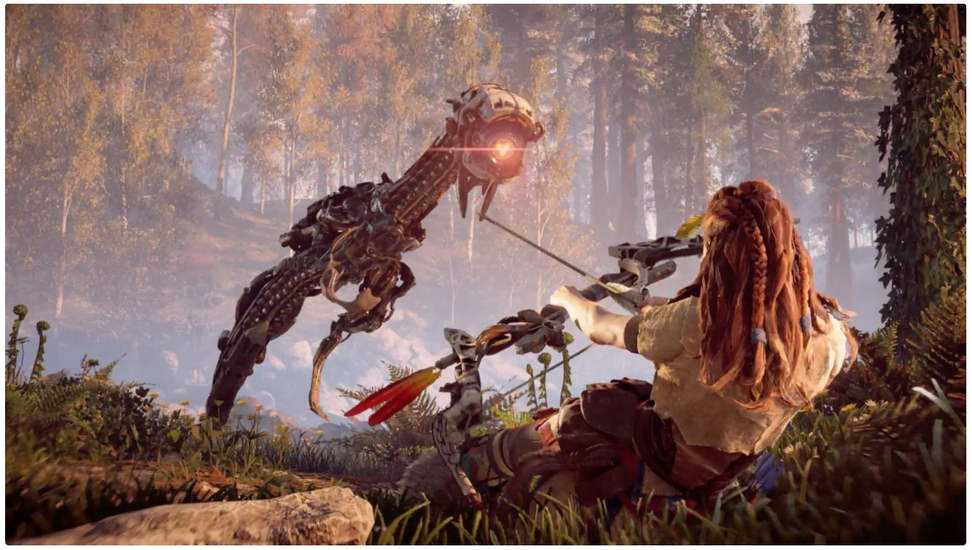
Solarpunk

I am wondering if it could be that people's confusion between the Anthropocene and the apocalypse herein from a lack of responsibility? An apocalypse is something that would happen *to* us, a punishment for our behaviour nonetheless, but still disconnected to our own actions. It still inscribes the mentality of a child or a worker in a factory. But we are not subsidiary to the ways of the world. Nor are we on top! We are within, making and being made by our surroundings. In the Anthropocene, we need to take responsibility for our behaviour and not wait for any punishment or praise respond from the outside, for there are no inside and outside. It is everything there is on earth, interconnected, as one. This geological shift demands a mental shift. Perhaps a better, more hopeful metaphor for our near future would be as the *post-post apocalypse*. Instead of preventing the irreversible, let us fix this. Let's think "Okay, the world is burning now what will we do next." I am playing with the idea of a society structured rhizomatically. I do not need to look further than to my own aesthetic preferences at *deviant-art* to find an already existing utopia that could fit the frame.[7]

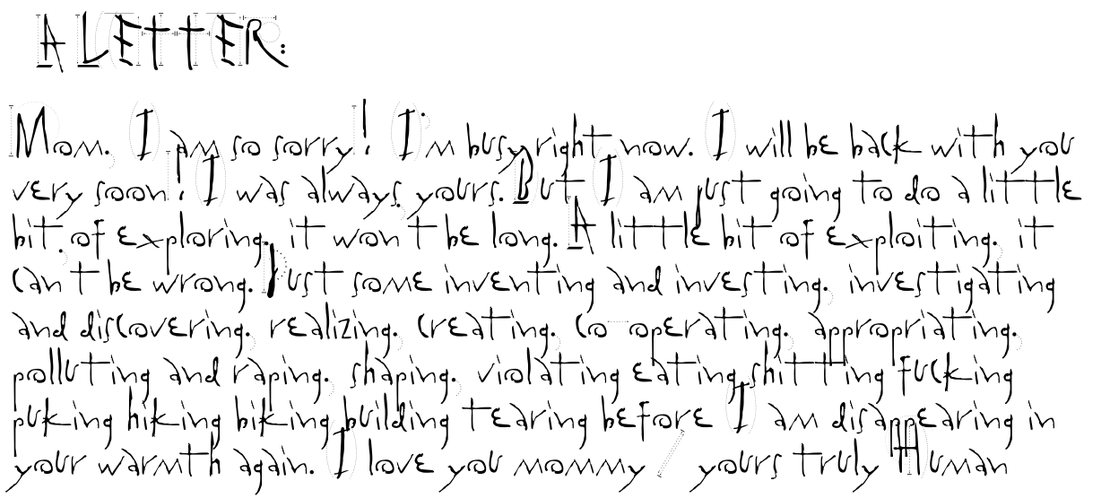
[6] Interview with McKenzie Wark by M Cem Menguc. **Molecular Red. Labor after Nature [1001 Plateaus. # 4]**
[7] DeviantArt is the world's largest online artwork community. It hosts over 100 million artworks, surrounding fan art, video games, digital illustration etc. launched in 2000. Here I am especially referring to Solarpunk concept art by Imperial Boy. https://www.deviantart.com/imperial-boy Accessed Mars 2019

Solarpunk is a small subcultural movement and science fiction genre where nature is supported and not destroyed by the modern human and modern technologies. Just as Steampunk has its starting point in the idea that technology would not have developed further than where it was during the industrial era, the starting point of Solarpunk is that it did develop and continued to do so from the time we are now, but was initially turned towards a more sustainable and local direction than we currently seem to have ended up today. The premise of science fiction is usually that of a story taking place in a future that follows a certain path in the present, often a not very pleasant one. A warning of what might be if we continued like this or that. In this way Solarpunk is a different type of science fiction, it is an utopia and it is not very far away. The Anthropocene needs acknowledgement and be taken reasonability for. A utopia like Solarpunk helps us imagine a solution, a way out of capitalism, using technological progress for good cause.

In a post- post-apocalyptic landscape Aloy is fighting robotic dinosaur-like creatures that is left from the old world, the one ruled by technology and the Godless men. A time we would recognize as now. The setting of the game presumes that a scenario occurred where modern technology and capitalism went on and went on until a reaching point. By this new era humanity have gone back to tribalism and cultism. The Matriarchs praise the earth and know the power and the danger of computing. Cables and cords are in this day in age used for braiding accessories and such only.



Horizon Zero Dawn
by Guerilla for PS4,
released february 20




CONCLUSION
A tech developer is a tree, a fashionista is a tree,
a scientist is a tree, and an artist is a tree

When I first started peeking into the philosophies of the present and near future I thought that every one of them that used the same terminology subscribed to the same theory. But of course this is not the case, there are as many thoughts and opinions about the future as there is about the present or the past. There are those who dread a scenario like the singularity, and there are those who enthusiastically welcome it. There are those who don't believe in it at all. It is easy to lose one's grip, and fall into a rabbit hole of science as interpreted by internet trolls, profiting companies, or at best benevolent artists like myself! It can be difficult to orientate oneself in a post-truth informational environment. Posthumanism, as I see it, is embracing this chaos in its scattering of information sources, its polycentric order. Indeed, everything is so scrambled and jungled! Just like the mycelium or the rhizome, quantum physics is about the being everywhere at once, as opposed to either or, ones and twos. The quantum computer executes multiple task simultaneously, un-orderly, while a basic computer executes one task after the other, in a linear order. It is binary, with zeros and ones, just like a branch from a tree that can not grow a leaf before a branch grows a twig.

Even though our present post-truth environment allows us greater opportunities to dismiss various authorities of knowledge due to a sense of common mistrust, I think it is important to try to stay real. *Agential real*. Just as we must be critical of the things which have supposed and reasonable (read measurable) proofs - we need to warmly welcome, but stay just as critical of the metaphysical. Things without proof can be just as true, but this doesn't mean that anything imaginable should automatically be assumed to be so. We have to remain aware of the apparatuses in between. The nature of nature does not have to be a product of our delusional senses in order to be something other than fixed and eternal. There is a middle ground, and that is that the nature of nature is as ductile as culture. Just like culture is as real as nature. I don't mean to imply that I think nature is culture or the other way around, but that the two are inseparable. Far more interdependent than we might want to think. Barad tells us that nature is discursive. Not only is our perception of the world entangled with the discursive, but also the world in itself. It comprises every actor and action co-creating our world. We are not only victims, players on a board game. Nor are we gods, in control of

creation. And when I say we - I do not mean us the humans, or even us the living beings, but any piece of (intra)acting physical matter. We are bricks and vibes. Together building and vibing, tearing down and forming. This implies the responsibility of every actor taking part in the making of a world worth vibrating in. A tech developer is a tree, a fashionista is a tree, a scientist is a tree, and an artist is a tree. We look like brilliant individuals, but we are intra-linked, intra-twined, intra-dependent.

I lean back to be held by the forest ground. I lay my whole set of body parts horizontally. Our veins is just beside yours. My clothes, the grass and some soil is what is in between. I know I will leave an imprint when I stand up. Grass will be pushed down. small animals will be leaving the area. I might have even broken a flower stem or two. The imprint is convex both ways. My back is soaking from the soil. My skin will bring an itch. I smell of green will linger on me.

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[see p. 63]

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3 • Julien Ceccaldi, *Praying Mantis*, 2018
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15 • Helen Marten, *1094 bones*, 2018
16 • Unknown artist, *Interior of a Gothic Church*, c. 1490
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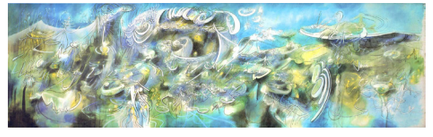
6. 7. 8. 9. 10



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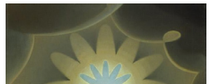

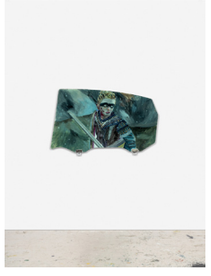

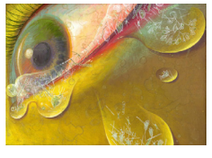

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COLOFON

Text: Josefina Anjou
Thesis Supervisor: Alena Alexandrova
Teachers: Jay Tan, Frank Mandersloot, Jean Bernard Koeman
Proofreader: Matthew Lessner
Graphic Design: Eliott Déchamboux Florey