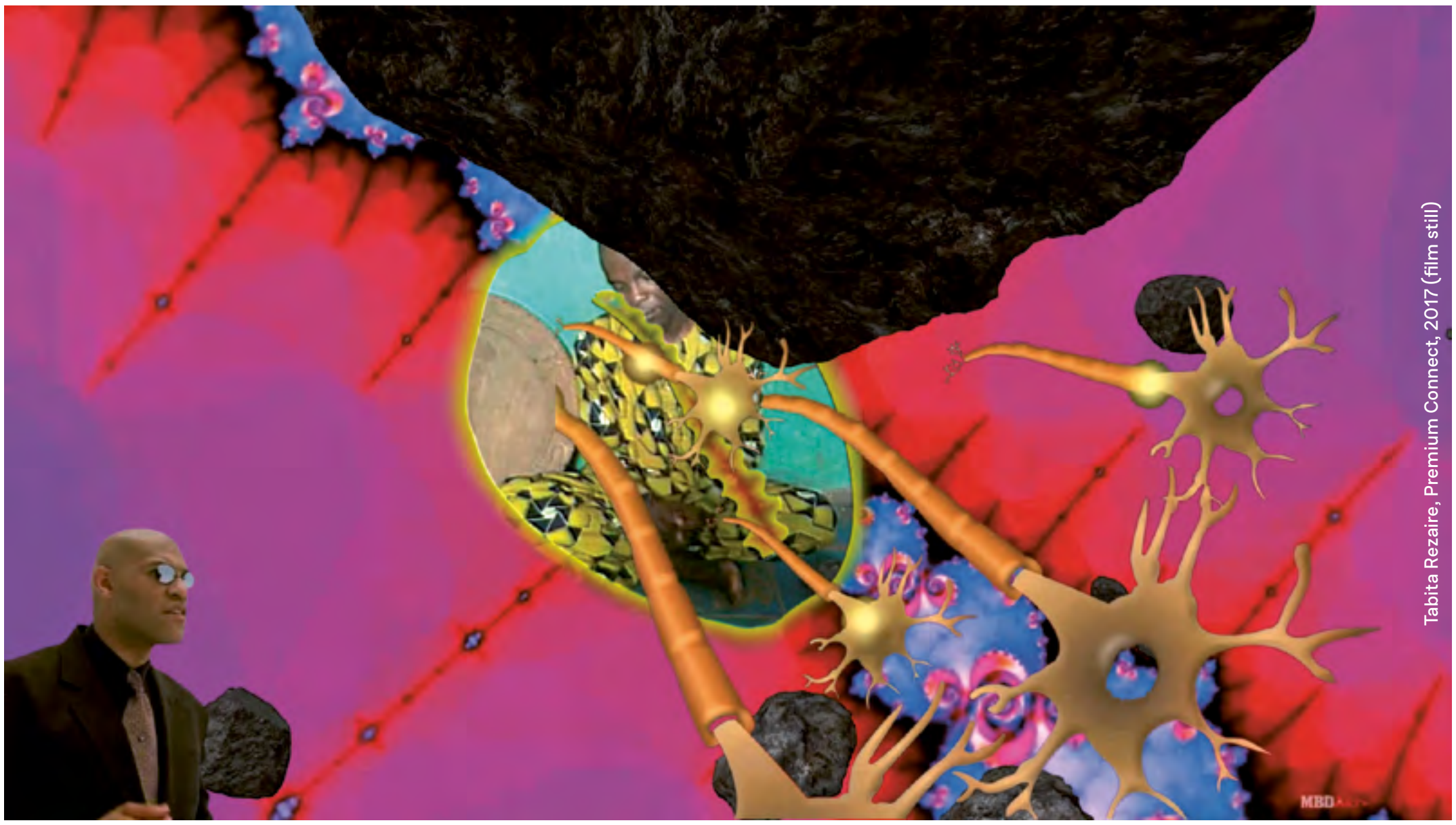
Activist Neuroaesthetics

Brain Without Organs



Tabita Rezaire, Premium Connect, 2017 (film still)

In celebration of the 25th anniversary of artbrain.org, ACTIVIST NEUROAESTHETICS is a festival of events including a symposium, three-part exhibition, conference, screenings, and publications, developed by lead institution Verein zur Förderung von Kunst und Kultur am Rosa-Luxemburg-Platz e.V. along with various local partners that will take place online and at different venues on Rosa-Luxemburg-Platz in Berlin over the course of 2021.

Under cognitive capitalism, the brain and mind are the new factories of the twenty-first century. We are no longer proletarians working on assembly lines, but cognitarians generating behavioural data that is bought and sold on futures markets (Zuboff, 2019). This data is not passive, but constitutes a new distribution that polices the sensible, perceptible, and cognitive through apparatuses of control such as Google Bubbles and Meme Magic. Just as the pioneers of cognitive capitalism realized the coming digital economy would create a crisis for labor and the production of subjectivity, so too another crisis is brewing exemplified by neural-based technologies (and their corporate counterparts like brain-computer interfaces and Neuralink) which focus upon the brain's plasticity as its locus for capitalist speculation.

Activist Neuroaesthetics is a generalized theoretical and aesthetic approach that refutes the dogma of what is known as Positive Neuroaesthetics. Positivist neuroaesthetics is a reductionist methodology that attempts to explain the aesthetic field and its production (artworks) by referring to neuroanatomical models aided by technology (i.e. neuroimaging). Its goals are to explain artworks, such as paintings, through its effects upon the brain's neural processing itself rather than as something happening independently, or outside of the material brain's jurisdiction (for example, in relation to events and processes happening in the world of art). It refutes the importance of the history of art as a causal factor in art production and conspires with capitalism to recuperate its most radical claims in order to make it palatable and normalized.

Activist Neuroaesthetics rather concerns artists using their own histories, techniques, apparatuses, materials and theoretical constructs to investigate the same fields of knowledge as cognitive neuroscience, but to produce an alternative discourse concerning perception and cognition where events going on inside and outside the brain coevolve together and our cognitive abilities are expanded, rather than normalized. Here, the brain not only refers to the intracranial brain consisting of neurologic matter, but also the situated body and the extracranial brain composed of gestalts, affordances, linguistic atmospheres and socially-engaged interactions. Activist Neuroaesthetics refuses the cynicism of Big Data, neural consumerism and DARPA generated technologies (such as optogenetics), and instead promotes an ethics of neural plastic emancipation and neural diversity to produce artistic facts, rather than scientific ones, that are organized into a generalized paradigm of resistance.

artbrain.org

Over the last 25 years, artbrain.org has developed alternative vocabularies and practices with which to rethink the fields that describe sensation, perception and cognition. Founded in 1996, artbrain.org consists of *The Journal of Neuroaesthetics and Chaoid Gallery* and was established by Warren Neidich and Nathalie Angles with an online launch in 1997. Since 1998, Neidich has continued the project and developed the term Activist Neuroaesthetics to describe an enactive approach to neuroaesthetics that not only understands the importance of neural plasticity in the material brain, but recognizes art as a generator of diversity which has the capacity to induce complexity and variability – which in turn is an important factor for understanding, and consciously enacting, social and political transformation.

"In the post-Neanderthal, the technological works in concert with physiology and ethno-sociology (or the symbolic): the corticalization process's conclusion requires the establishment of epiphylogenesis as defined here: no longer of the cortex but rather of the social—as what is different from "tools." Becoming ethnic begins as a movement of differentiation that is no longer only the enrichment of technical forms, but the human group's territorial diversification. Consequently, the social receives its new definition in a new instrumental maieutics. And thus Leroi-Gourhan pursues his thoughts regarding exteriorization, which began in a kind of prosthetic extruding of the skeleton into the tool ("veritable secretion of the body and the brain"), and which he will then follow through to the current stages, the central nervous system (as the electronic), imagination (as the specialized industrial production of tele-diffused images and sounds), and muscle (as exteriorization of "motricity" from the mastery of natural energies to the domestication of animals to the motorized machine). The fact that imagination is fundamentally implicated in this process means that exteriorization is also the principle of the aesthetic."

Bernard Stiegler, *Technics and Time*, 2: *Disorientation*

The Manifesto of Activist Neuroaesthetics

by Warren Neidich

1.
Every person on planet Earth has the right to fully develop their neural plastic potential. Activist Neuroaesthetics seeks to produce fully developed singular entities constituting a multiplicity whose differences in neural architectures (their neural diversity) result from an entanglement with a variable, diverse and constantly changing social-cultural milieu.

2.
Activist Neuroaesthetics suggests that artists play a key role in producing this variation and as a result have the power to create our own brains. As Catherine Malabou states (recalling Marx in The Eighteenth Brumaire of Louis Napoleon), ‘‘Humans make their own brain, but they do not know that they make it’’ - nor do they understand the very power that they have access to.

3.
Neural plasticity refers to the ways and means that the brains’ structure and function is modified within limits by experience throughout life, although more so in youth.

4.
Activist Neuroaesthetics embraces this neural plasticity/cultural plasticity entanglement as a political tool and a means for change, resistance, and emancipation against the powers of neural capitalism that aim to normalize it by sculpting its potential into something supple and easily controlled. As Catherine Malabou states: “Flexibility is plasticity without its genius.” While flexibility encourages supplication to power by unquestionably taking on its form, plasticity counters its power by inventing and creating its own form.

5.
We are on the verge of a paradigm shift as we transition from a knowledge and information based economy to a neural grounded one. The advent of an immanent assortment of new neural technologies will constitute what is already being referred to as neoliberal neural capitalism. Technologies like brain-computer interfaces, neural and smart dust composites, cortical implants and attention enhancing drugs will join sophisticated forms of artificial intelligent agents. Together they will give new meaning to forms of surveillance and digital governance already at play under the rubric of Big Data and the Big Other. Just as technologies like mobile phones and iPads created new circuits of subjective participation in the past precipitating what has now become known as real subsumption, in which life itself is commoditized, so too will these new technologies generate a new crisis of mental labor leading to neural subsumption.

6.
In neural subsumption all our thoughts, conscious and unconscious, will be collected, collated and monetized. The connection of the brain to the Internet of Everything, Virtual Reality and the World Wide Web through such new technologies like brain-computer interfaces, as has been suggested by such corporate entities like Neuralink and Facebook, will precipitate what is referred to as the Statisticon.

7.
The Statisticon is the most recent example of a form of power and governmental regulation that eclipses what Michel Foucault called “disciplinary power” and Gilles Deleuze labeled the “society of control.” As its name implies, the Statisticon is linked to the functional regularities found in data (especially those produced by Big Data) and has led to a new form of surveillance called the Big Other by Shoshana Zuboff. The key to the Statisticon is the process of voluntary auto-exploitation and the resulting difficulty in the production of solidarity and comradeship making a resistance to the dictatorship of capitalism almost impossible.

8.
Art’s power resides in its capacity to destabilize the authorized designed gestalts and affordances operating in the existential field of lived politically entangled sensible experience as well as those emerging in the immanent telemetric and telepathic technologies of neural capitalism.

9.
Positivist Neuroscience and Positivist Neuroaesthetics link with neoliberal neural capitalism to form a conservative dominion. Positivist Neuroaesthetics frames art as an assemblage of non-changing essences that can be experimented with to produce neuro-scientific insights (rather than artistic ones) subsumed by the vast scientific universe with its own determinant rules and ideas of truth: rules at odds with artistic methods that do not require peer review and repeatable results subject to statistical investigation. In turn, this understanding of art minimizes the liminal and the role of the unconscious.

10.
Activist Neuroaesthetics promotes the idea that the brain is a brain without organs (BrWO). The brain without organs is a phrase based upon the idea of the body without organs originating in the writings of Antonin Artaud and expanded by Gilles Deleuze and Felix Guattari. Artaud wrote, “The body is the body / it stands alone / it has no need of organs / the body is never an organism/ organisms are the enemies of bodies.” According to them, the problem of the organism is to make an alternative body without organs which unleashes its unformed, “unstable matters, by flows in all directions and free intensities, or nomadic singularities, by mad or transitory particles.” (1987) Like the body without organs, the brain without organs must free itself from imprisoning intensities and deterritorialize the strata that lock singularities into prescribed systems, in other words, from systems that are acts of God. In cognitive capitalism, in which the brain and mind are the new factories of the 21st century, cognitive labor has subsumed manual labor. Bodily labor situated on the assembly line is replaced by mental labor performed on keyboards in front of computer monitors. In cognitive capitalism, the radicalizing effects of the body without organs are diminished. The synchronous and contiguous movements of the laboring body, once directed by Taylorist management techniques and styles of performance that the body without organs had once been directed against, have lost their effectiveness as dispositifs of dissensus. The transition of the proletariat to the cognitariat requires new techniques to manage cognitive labor. The body without organs is no longer sufficient as an apparatus of emancipation because the stratified body, which it was able to release, has been replaced by the laboring mind linked to the noosphere beyond its reach. BrWO is such a tool. The brain without organs disrupts the intensive flows between the situated and intracranial brain and its extracranial counterpart with which it is entangled.

11.
Activist Neuroaesthetics actively engages with the cultural milieu to instigate complex changes in the materiality of the brain. As Victoria Pitts-Taylor has written in the introduction to her book The Brain’s Body: Neuroscience and Corporeal Politics (2016): “Although it is not framed as such in scientific accounts, the plastic, social brain also reveals neurobiology to be political - that is, capable of change and transformation and open to social structures and their contestation.”

12.
Activist Neuroaesthetics questions what neuro-enhancing drugs, new technologies (like brain-computer interfaces that link the brain to the internet currently explored by companies like Facebook and Neuralink), and the transition from artificial neural networks to artificial intelligence will do to our sense of self and freedom. Activist Neuroaesthetics is against Positivist Neuroaesthetics’ engagement with the industrial/military/mediated components of neural capitalism and its totalitarian inclinations.

13.
Activist Neuroaesthetics understands that our capacity to consciously and directly affect our complex environment of evolving relations through artistic interventions is key to its importance and value as an emancipatory ethics. Key to the ethics of Activist Neuroaesthetics is to create what Rosi Braidotti has called a radical post-humanism; a humanism without Eurocentrism which displaces its unitary subject and replaces it with a complex global non-binary relational one.

From the Body Without Organs to the Brain Without Organs

by Warren Neidich

“Brain without organs” is a phrase based upon the idea of the “body without organs” originating in the writings of Antonin Artaud and expanded on by Gilles Deleuze and Felix Guattari. Artaud wrote, “*The body is the body / it stands alone / it has no need of organs / the body is never an organism / organisms are the enemies of bodies*.” In *A Thousand Plateaus*, Deleuze and Guattari expand this idea to understand that the body without organs (BwO) is based upon a rhizome structure which, unlike roots or branches of trees, connects any point in the body to any other point. “The rhizome pertains to a map that must be produced, constructed, a map that is always detachable, connectable, reversible, modifiable, and has multiple entryways and exits and its own lines of flight.”[1] Like the rhizome, the body without organs is an “acentered, non-hierarchical, non-signifying system without a General and without an organizing memory or central automaton, defined solely by circulation.”[2] According to them, the problem of the organism is to make an alternative BwO which unleashes its unformed, “unstable matters, by flows in all directions, by free intensities, or nomadic singularities, by mad or transitory particles.”[3] Like the body without organs, the brain without organs (BrwO) must free itself from imprisoning intensities and deterritorialize the strata that lock singularities into prescribed systems. In other words, from systems that are acts of God.

In cognitive capitalism, in which the brain and mind are the new factories of the 21st century, cognitive labor has subsumed manual labor. Bodily labor situated on the assembly line is replaced by mental labor performed on keyboards in front of computer monitors and with swipes on iPhones. In cognitive capitalism, the radicalizing effects of the body without organs are diminished. The synchronous and contiguous movements of the laboring body, once directed by Taylorist management techniques and styles of performance that the BwO had once been directed against, have lost their effectiveness as *dispositifs* of dissensus. The transition of the proletariat to the cognitariat required new techniques to manage cognitive labor rather than bodily labor. Hebbianism (named after the Canadian neuropsychologist D.O. Hebb) has replaced Taylorism.[4] Hebbian Theory, often paraphrased as *neurons that fire together wire together*, understands that nerve activity can leave a trace that can be modified and transformed.[5] Experience and repetition have effects on long-term memory and forms the basis for our current understanding of neural network efficiency and sculpting at the heart of theories of surplus-value of end-stage cognitive capitalism. The body without organs is no longer sufficient as an apparatus of emancipation because the stratified body, which it was able to release, has been replaced by the laboring mind linked to the noosphere.

The brain without organs is also rhizomatic and as such constructs and reconstructs maps that are always detachable, connectable, reversible, and modifiable. Its multiple entryways and exits, and its own lines of flight disrupt certain intensive flows and welcome others between the intracranial and situated brain and its extra-cranial counterpart with which it is entangled. New territorializing styles of cognitive management (such as memes, fake news, clickbait and Google bubbles) have joined advanced digital design techniques (used first in game design like 3-D modeling and motion-graphic animation, but which have become pervasive in various media platforms such as news and films) to create engaging and emphatic attention-grabbing environments.

Formal subsumption prevalent in Fordism has transitioned to real subsumption in post-Fordism in which life itself has been commoditized. We are at the tipping point when information and knowledge economies will transition into neural-based ones because of advanced neural-focused technologies like brain-computer interface programs linked to the World Wide Web and virtual reality as well as neural dust-smart dust assemblages. Real subsumption will transition into neural subsumption in which our conscious and unconscious thoughts will be open to surveillance and data mining.

The brain without organs is necessary to confront these new forms of neural subsumption soon to be enforced by both the State and stateless corporate digital governance. BrwO also operates at points of contact between nodes called synapses in neural networks (artificial and otherwise) resulting in deterritorialized local and global relations. These synapses are strong and weak according to the expression of their output weights and activation function. The brain without organs regulates expressions of one stratum to another through controlling feedback and feed-forward processes. As such, it adjusts the expression of the summation of all the weights of the previous layer and unleashes or represses the networks’ pure pluri-potentiality and variability of becoming. Tracing Deleuze’s idea of the body without organs and superimposing it upon a notion of the brain, one could say that the brain without organs does not lack modules, hubs, and verifiable cognits (the building blocks of cognitive networks), it simply lacks the sovereignty of organism that is a particular organization of organs. The brain without organs is an alternative and contingent organization and neural plasticity is its agency. Speaking about the body without organs Deleuze and Guattari state, “Thus the body without organs is opposed less to organs as such than to the organization of the organs insofar as it composes an organism. The body without organs is not a dead body but a living body all the more alive and teeming once it has blown apart the organism and its organization.”[6] The same can be said about the brain without organs. It is not opposed to the organs of contemplation, but rather the forces that attempt to focus and normalize its architecture. Its neural plastic potential is a form of the common that has recently been under assault by neoliberal politics and its apparatuses; private and corporate ownership which wants to sculpt its networks in its own image in order to produce a normalized, univocal cognitive laborer. The brain without organs wants to displace this unitary subject and replace it with a complex, global, non-binary relational one.

NEGENTROPY

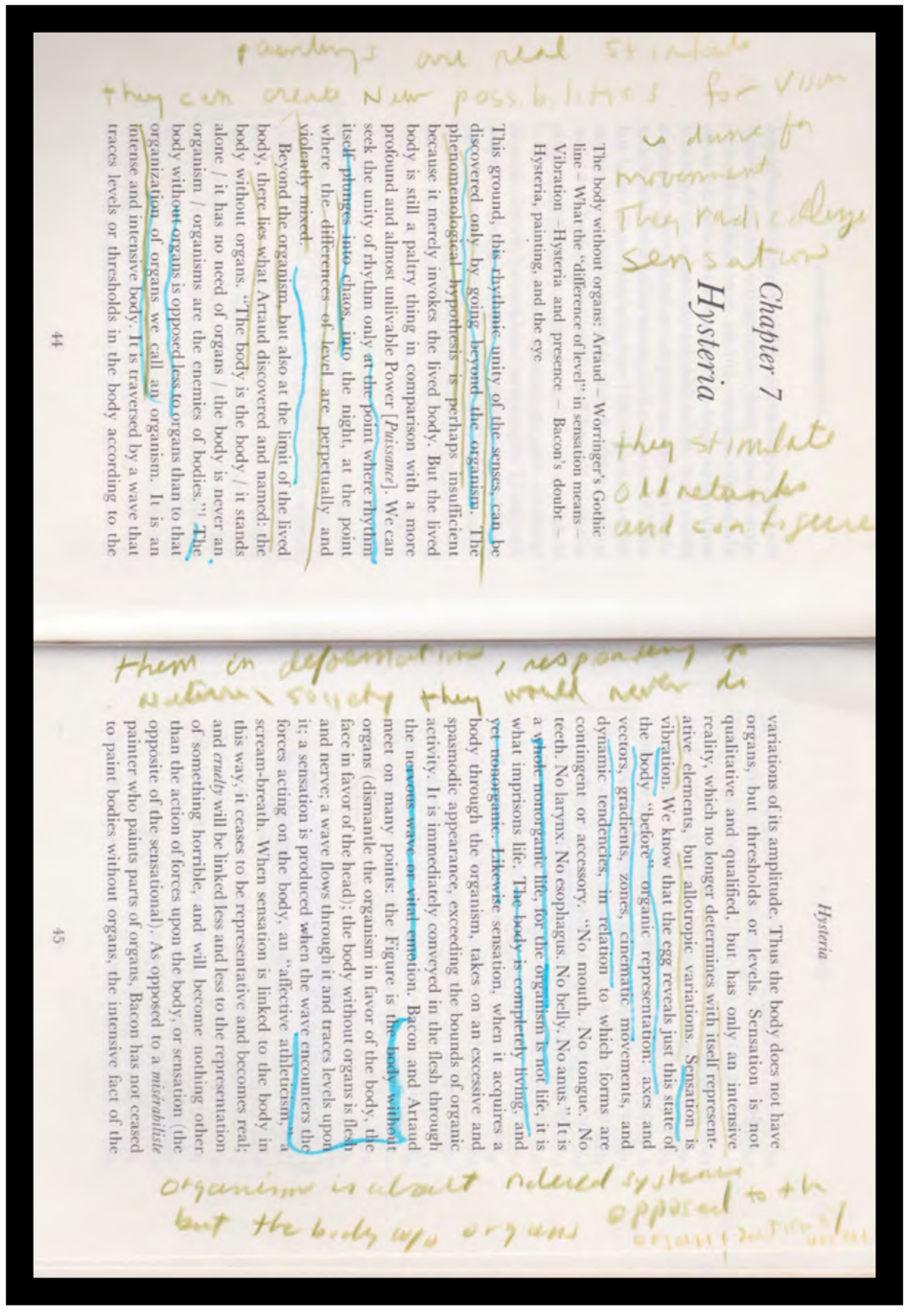
The word “negentropy” was coined by Léon Brillouin, but made famous by Norbert Wiener in his explanation of information as the negation of entropy. As such, it is meant to refer to those conditions that negate disorder, or the negation of everything contingent or unpredictable. Entropy thus became linked to definitions of noise as a measure of variability or imprecision. For Wiener, information is a measure of increased constraint. As Cecile Malaspina noted in *An Epistemology of Noise*, “by emphasizing the negation of contingency our idea of information has become tethered to predictability and consequently antithetical to noise as the unpredictable.”[7] Opposed to this notion of noise and information is that proposed by Claude E. Shannon and Warren Weaver in their 1964 book *The Mathematical Theory of Communication*. Malaspina draws attention to the distinction they make between information entropy of potential information which generates freedom of choice and knowledge production and that of noise entropy which is spurious and requires negation.

CONTINGENCY

In the words of Robin Mackay, “‘contingency’ refers to the attempt to think events that take place but need not take place: events that could be, or could have been, otherwise.”[8] Furthermore, it is “that which thinking can grasp only *as event*, not as proceeding from a rational necessity.”[9] It spells the ruin of dogmatic accounts that attempt to bind all principles (whether they be past, present, or future) into a comprehensive narrative that is already known from the moment the first characters are introduced. It is a result of insipid platforms of normalization that have endo-colonized the collective intelligence. Contingency is a wellspring of hope for the possibility of estrangement and withdrawal. As Quentin Meillassoux states in *After Infinitude*: “The contingent … is something that finally happens—something other, something which, in its irreducibility to all pre-registered possibilities, puts an end to the vanity of a game wherein everything, even the improbable, is predictable.”[10] How this contingency will stand up to the overwhelming effects of Big Data and the Big Other is anyone’s guess.

On another front, Reza Negarestani defines an artwork in terms of the contingency of its materiality because it can become the basis for new interactions and dynamic processes that drive the artist to novel realizations and opens up the potential of the work not assumed at its inception. However, it might also have the opposite effect; closing down the progress of the work even to the point of its immobilization. He states that contingency “is the simultaneous suspense of infinite likelihoods and inexplicable frozenness.”[11]

1 Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. Brian Massumi (London: University of Minnesota Press, 1987), 21.
2 Ibid, 30.
3 Ibid, 40.
4 Neidich, 2015
5 D.O. Hebb, *The Organization of Behavior: A Neuropsychological Theory* (New York: Wiley and Sons, 1949).
6 Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, 34.
7 Cécile Malaspina, *An Epistemology of Noise* (Bloomsbury, 2018), 5.
8 Robin McKay, “Introduction. Three Figures of Contingency,” *The Medium of Contingency* (Urbanomic Media, 2015), 1.
9 Ibid.
10 Quentin Meillassoux, *After Finitude*, trans. R. Brassier (New York and London: Continuum, 2006), 108.
11 Reza Negarestani, “Contingency and Complicity,” in R. McKay, *The Medium of Contingency* (Urbanomic Media, 2015), 11.



Chapter 7
Hysteria

The body without organs: Artaud – Worringer's Gothic line – What the "difference of level" in sensation means – Vibration – Hysteria and presence – Bacon's doubt – Hysteria, painting, and the eye

This ground, this rhythmic unity of the senses, can be discovered only by going beyond the organism. The phenomenological hypothesis is perhaps insufficient because it merely invokes the lived body. But the lived body is still a paltry thing in comparison with a more profound and almost unlivable Power [*Puissance*]. We can seek the unity of rhythm only at the point where rhythm itself plunges into chaos, into the night, at the point where the differences of level are perpetually and violently mixed.

Beyond the organism, but also at the limit of the lived body, there lies what Artaud discovered and named: the body without organs. "The body is the body / it stands alone / it has no need of organs / the body is never an organism / organisms are the enemies of bodies."[1] The body without organs is opposed less to organs than to that organization of organs we call an organism. It is an intense and intensive body. It is traversed by a wave that traces levels or thresholds in the body according to the

variations of its amplitude. Thus the body does not have organs, but thresholds or levels. Sensation is not qualitative and qualified, but has only an intensive reality, which no longer determines with itself representative elements, but allotropic variations. Sensation is vibration. We know that the egg reveals just this state of the body "before" organic representation: axes and vectors, gradients, zones, cinematic movements, and dynamic tendencies, in relation to which forms are contingent or accessory. "No mouth. No tongue. No teeth. No larynx. No esophagus. No belly. No anus." It is a whole nonorganic life, for the organism is not life, it is what imprisons life. The body is completely living, and yet nonorganic. Likewise sensation, when it acquires a body through the organism, takes on an excessive and spasmodic appearance, exceeding the bounds of organic activity. It is immediately conveyed in the flesh through the nervous wave or vital emotion. Bacon and Artaud meet on many points: the Figure is the body without organs (dismantle the organism in favor of the body, the face in favor of the head); the body without organs is flesh and nerve; a wave flows through it and traces levels upon it; a sensation is produced when the wave encounters the forces acting on the body, an "affective athleticism," a scream-breath. When sensation is linked to the body in this way, it ceases to be representative and becomes real; and *cruelty* will be linked less and less to the representation of something horrible, and will become nothing other than the action of forces upon the body, or sensation (the opposite of the sensational). As opposed to a *misérabiliste* painter who paints parts of organs, Bacon has not ceased to paint bodies without organs, the intensive fact of the

“ You never reach the Body without Organs, you can't reach it, you are forever attaining it, it is a limit. People ask, So what is this BwO?—But you're already on it, scurrying like a vermin, groping like a blind person, or running like a lunatic: desert traveler and nomad of the steppes. On it we sleep, live our waking lives, fight—fight and are fought—seek our place, experience untold happiness and fabulous defeats; on it we penetrate and are penetrated; on it we love. On November 28, 1947, Artaud declares war on the organs: To be done with the judgment of God, "for you can tie me up if you wish, but there is nothing more useless than an organ." Experimentation: not only radiophonic but also biological and political, incurring censorship and repression. Corpus and Socius, politics and experimentation. They will not let you experiment in peace. The BwO: it is already under way the moment the body has had enough of organs and wants to slough them off, or loses them.”

Gilles Deleuze and Félix Guattari, A Thousand Plateaus: Capitalism and Schizophrenia (University of Minnesota Press, 1980)

Exhibition

Douglas Gordon, Dafna Maimon, Warren Neidich, Jeremy Shaw, Ryan Trecartin & Lizzie Fitch, Tabita Rezaire, Alfred Ehrhardt

The brain without organs derives its name from the earlier concept, the body without organs, as it was first defined by Antonin Artaud and later expanded upon by Gilles Deleuze and Felix Guittari in *Anti-Oedipus* (1972), *A Thousand Plateaus* (1980) and later *Francis Bacon: The Logic of Sensation* (2003). It describes a body that is totally unfixed, like a teratoma. In the body without organs, the organization of organs – from their cellular structure, to their relationship with other organs and their relationship with the organism as a whole – is free from the despotism of the body's overall plan. In other words, it is free from the rules and regulations of the *a priori* program situated in the DNA code. "The body without organs is thus defined by an indeterminate organ, where as the organism is defined by determinate organs." (Deleuze, 2003)

This indeterminacy and contingency becomes an entry point for the first part of the exhibition Activist Neuroaesthetics, *Brain Without Organs*, as a practice. By superimposing the idea of the body without organs onto a notion of the brain, one could say that a brain without organs does not lack modules, hubs, and verifiable cognits – it simply lacks the organism. As a particular organization of organs, the brain without organs is, itself, an indeterminate organ – and neural plasticity is its agency.[1] The brain without organs is opposed less to the organs of thought and mental labor than to the organization imposed upon those organs through neural capitalism and neoliberalism. Activist Neuroaesthetics describes the contemporary forms of artistic practice with which artists confront the new conditions of mental labor in cognitive capitalism and the brain without organs is one of its tools or set of practices. It utilizes the experimental capacities of the brain without organs to fight new forms of the terror of the state apparatus on the mental and cognitive capacities of the thinking, working subject. In the brain without organs, the brain is understood to mean in its extended and full definition.

Douglas Gordon, 30 seconds text, 1996
(installation 2021)

This early work of the artist is based on an experiment that was performed in France in 1905 when a doctor tried to test human neural reaction by communicating with a condemned man's severed head immediately after the guillotine execution. It literally translates the documented 30 seconds dialog in an environment that allows the viewer to see the work for the same limited period of time, thus – in direct relation to the exhibition's title - questions the essential nature of human consciousness.

It consists not only of an intracranial component enclosed within the cranium or bony skull, but also in its situated and external capacity as intensities in dynamic flux. Both Activist Neuroaesthetics and the brain without organs sees the brain as a living sculpture in the process of becoming, an artistic work in progress.

The *Brain Without Organs* exhibition is composed of works which each describes or dramatizes different aspects of this process of the brain without organs. First, is the process of epiphylogenesis through which an accelerated technological evolution has reverberated in changes in the brain itself. In his essay on Bernard Steigler and the "Industrialization of Memory," Ben Roberts describes this "new process of exteriorization whereby the interior of the living being becomes inextricably bound up with an exterior realm of tool."[2] The history of the human is therefore no longer in the realm of genetic evolution, but that of technical evolution (or the evolution of "organized inorganic beings'') in which it is impossible to separate the living being from its external prosthetic technical support. Stiegler distinguishes this technical evolution from biological evolution (phylogenesis) by calling it epiphylogenesis. This becomes evident in the video "Item Falls" (2013) by Ryan Trecartin and Lizzie Fitch in which thirteen Internet natives interact in shared simulated space as if they were animation figures caught in an infinite rehearsal of a reality TV skit. They are entangled in a slapstick rhizomatic network that combines cameras used to film themselves accompanied by a dizzying array of camera movements, fast cuts performed by final cut pro and animation software, tweet dialogues which becomes their form of communication and vogueing in which their body postures and facial forms mimic those of fashion models seen in magazine articles and television shows. This film is aesthetically mesmerizing, but also mirrors the oppressive conditions of new technology as figures who have lost agency and ownership of their consciousness (an expression of their brains combined neural connections and output) which has been overtaken by the technological devices themselves. This work is, in fact, an interrogation of digital reality as a reality of exploitation. They are reduced to a new form of abstract labor, figments caught in a spiral of multiple exteriorizations and waves of epiphylogenetic intensity.

1 I use the term neural plasticity as Catherine Malabou does in The New Wounded in which she specifies three principals. First, as something like clay that receives form. Secondly, as raw power that gives form or molds something. Finally, the word plastic is also associated with plastic explosions and thus its capacity to designate that which causes destruction or deflagration.

2 Ben Roberts, *Cinema as Mnemotechnics*, "Bernard Stiegler and the 'Industrialization of Memory'," Angelaki, 11(1) 2006. 55-63.

John Armleder, Untitled (candle, blue), 2004
(staged for BrWO 2021)

Known for sculptures and installations that blend pop culture and design, the recurring subject of a brain is due to the artist's interest in anatomical models. Over the course of the exhibition the candle will be lit representing on one hand the fire that erupts in the mind during a new idea and on the other recalling the plastic nature of experience in molding the brain's form. The imperfection of the object in time, its abnormal melting and shaping, draws attention to the idea of a diversity and multiplicitous brain.

In her film "Premium Connect" (2017), Tabitha Rezaire uses a more gentle, but similar, computer generated array of audio-visual techniques to construct a very different narrative for a post-Internet subject of the other. Her work is also an interrogation of digitality, but she uses a different assemblage of methods and techniques to make her point. The chromatic abrasiveness and hysteria of the Trecrartin-Fitch video is replaced by a more open and generous methodology that circumvents the Internet of neoliberalism and neural capitalism. The oppressive, dehumanizing and objectifying techniques found in the Trecartin-Fitch work are gone and replaced by a more journalistic and essay format consistent with knowledge production and distribution. Collaged images of computers, the brain, neurons, ancient African Steles, humans and plant rhizomes, create a virtual space she likens to a "wood wide web." One is reminded of Bruno Latour's actor-network theory in which animal-human, inorganic and organic, and live and dead materialities form networks of relations. Key here is her interest in IFA cosmology in which matter is neither created or destroyed and everything exists as a double. The binary code emanates from this cosmology according to the author. Rather than a reality that leads to the Matrix in which humans are used to create batteries to run an alternate reality (and Morpheus says to Neo you are living in a dream world), the Internet becomes an emancipatory means to connect to a history of ancestors. It is this omnipresence that now forms the brain and consciousness.

In John Armleder's "O.T." (2004) another aspect of the brain without organs is exemplified. Here, a candle shaped in the form of a brain rests on a pedestal and is lit each time a visitor comes into the gallery. This ritualized performance leaves its mark in the shape of the blue brain sculpture which over time will melt into another form. Flexibility is understood

Tabita Rezaire, Premium Connect, HD-Video, 2017
(installation 2021)

Premium Connect investigates cybernetic spaces where the organic, technological, and spiritual worlds connect. In conversation with the Nigerian philosopher Sophie Oluwole, this video work is a study of dynamic networks from artificial, spiritual, and biological environments that digs into the politics of possibilities, where a mystico-techno-consciousness could nurture a mind-body-spirit-technology symbiosis. The work explores spiritual connections as communication networks and the possibilities of decolonial technologies from an African point of view. (TR)

Alfred Ehrhardt, Fiber Trains of the Varols Bridge (Human), magnified app. 1600x, 1939

In the 1930s and 40s, Alfred Ehrhardt took various scientific picture series of great abstract quality. In the tradition of Ernst Haeckel and Karl Blossfeld, he developed fascinating close-ups of crystals, mussels and other marine species as well as microphotographs of vitamins and neurons – among other things – in which a new, experimental visual aesthetic develops out of the forms existing in microcosm, which the artist himself connects directly to consciousness.

by Catherine Malabou in *What Should We Do with Our Brain?* (2004) as "plasticity minus its genius." In the new economy, flexibility is a component of success; however, it also connotes a capacity to become docile and supple, to passively take form. It thus lacks the essential quality of being plastic, which is the ability to create form rather than simply conforming to its impressions. This constitutes the core of Malabou's theory, that the brain's neural plasticity is a potential source of human freedom rather than servitude. By creating new connections and networks in the world, we create new networks in the brain as well. This is the source of our freedom. Armeleder's sculpture refuses the organization of the mental organs, implicit neural capitalism and forms of governmentalization (or Foucault's term mentalite). It uses contingent processes of immolation and plastic forms as mediums of resistance. At the end of the exhibition, the work will be a puddle of wax covering the plinth and, as such, completely escapes the organization principles that had given it a specific form.

Warren Neidich's work "Brain Without Organs" (2021) looks into the future of virtual reality in which, instead of changes of gaze acting to guide the user through virtual space, brain waves generated by a VR-Brain Computer Interface (BCI) helmet guide the experience. Data collected from multiple users wearing the VR-BCI headsets are mixed with those being generated by phantom limbs sprouting from the broken limbs of the Parthenon Marbles at the base. The degree of interaction between the users and the virtual sculpture determine the brightness and color saturation of resonating pathways of the artificial sculpture. The sculpture is a social sculpture as users experience the changes that their choices make. Its changing morphology is based upon a code written according to the rules and theories of neural Darwinism and Neural Constructivism. These theories are guided by Hebb's Postulate that states 'the neurons that wire together fire together' and as a result increase, or decrease, the efficiency of neurons interacting together in a neural net. This theory forms the basis of theories of neural plasticity. These theories are essential in pruning models used in artificial neural networks based on real life neural networks. The sculpture is a model for a 3-D interactive virtual reality program to be designed in the future.

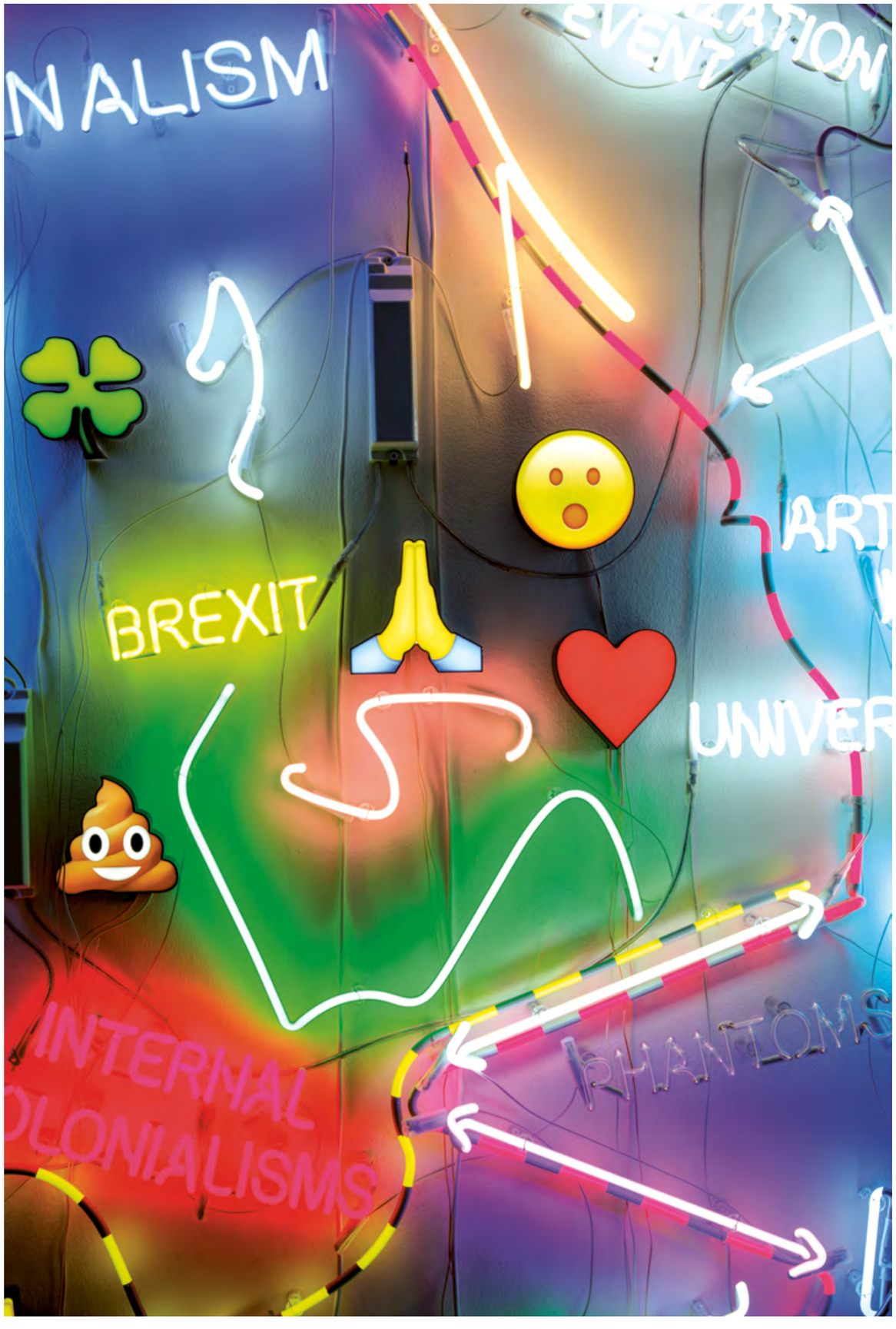
Douglas Gordon's "30 Second Text" (1996) is a dramaturgy in which the spectator attempts to complete reading a text written in white letters on the front wall of a specially designed space in just 30 seconds before the lights, like a guillotine slicing through the neck and spinal cord, are switched off. The story recounts a doctor's thirty second interview of the severed head of a convicted prisoner newly disconnected from his body, but somehow still alive and communicative. One thinks that the work is about reading and deciphering this script in the short time allotted. Most people don't have time to read it, but that is not the point of the work anyway.

The point is not whether or not something like this could be possible – most likely it is not – but rather that the scenario fabricated by the artist generates a set of conditions that puts the visitor own notion of subjectivity in jeopardy. The text and the subject form an empirical nightmare resulting from their disentanglement and decapitation.

Dafne Maimon's "The She the Same" (2014) is a video that uses the phantom limb phenomena as a metaphor for a love that is lost and the consequences that has for the body. The phantom limb syndrome, in which patients experience pain or tickling in a limb that is missing, is reported to occur in about 80 -100 percent of amputees. Remapping of phantom sensations can occur because of what is called cortical reorganization. As an example of neural plasticity it is the result of a lack of afferent or sensory stimulation to a part of the brain formerly linked to the missing appendage and a crossing of wires during healing and regeneration. For instance, a missing hand can become represented as small patches on the cheek. Touching the cheek with a cotton swab elicits a phantom sensation in the missing hand. When we enter the video, the main male character is touching his limp hand to his cheek recounting the intimate relation of the hand to the check in the somatosensory cortex of the brain where the face and hand are adjacent to each other. This association of phantom loss and abnormal healing becomes a metaphor for the psychic loss and embodied trauma which constitutes the loss of a lover in which the history of intimate caresses have left traces that linger. To understand this entanglement of the psychic and neurological we must introduce Catherine Malabou's concept of cerebrality which is the word for the causal value of the psychic damage inflicted by purely neurological causes. Rather than linking internal conflicts of a specifically psychosexual nature to explain psychic distress, it understands the role of neuroanatomical destruction to its etiology. The characters in "The She The Same" are representative of what Malabou refers to as the "new wounded." She says, "I thus authorize myself also to extend the category of "new wounded" to cover every patient in a state of shock who, without having suffered brain lesions, has seen his or her neuronal organization and psychic equilibrium permanently changed by trauma. Such patients also suffer, in particular, from an emotional deficit."

“Humans make their own brains, and they do not know that they do so. Our brain is a work, and we do not know it. Our brain is plastic, and we do not know it. The reason for this is that most of the time flexibility superimposes itself on plasticity, even in the midst of scientific discourses that take themselves to be describing it entirely “objectively.” The mistake in certain cognitivist discourses, for instance, is not that they reduce the mental to the neuronal or the mind to a biological entity. I am myself entirely materialist, and such affirmations do not shock me at all. The error is in thinking that neuronal man is simply a neuronal given and not also a political and ideological construction (including of the “neuronal” itself). (...) It is as though, under the pretext of describing synaptic plasticity, we were really looking to show that flexibility is inscribed in the brain, as though we knew more about what we could stand than about what we could create. That said, securing a true plasticity of the brain means insisting on knowing what it can do and not simply what it can tolerate. By the verb to do or to make [faire] we don’t mean just “doing” math or piano but making its history, becoming the subject of its history, grasping the connection between the role of genetic nondeterminism at work in the constitution of the brain and the possibility of a social and political nondeterminism, in a word, a new freedom, which is to say: a new meaning of history.”

Catherine Malabou, What Should We Do With Our Brain? (Fordham University Press, 2008)



Ryan Trecartin & Lizzie Fitch, Item Falls, 2013 (film still)

Trecartin's virtual twisted media reflection exposes how much the apparatus of the camera, and technology in general, has become incorporated into one's own self-image and subjectivity. Voguing, in which dance moves consist of a series of stylized poses that imitate fashion models (most notably featured in Madonna's Vogue music video), here becomes hypertrophic partial gestures in a complex actor network performed during a digitalized rehearsal that transforms into the performance itself. Together, their antics form a new generational morphologic iconography of the so-called digital (or internet) native or immigrant and exposes the result of the effects of cinematic and digital technology on the brain and mind. In Item Falls, originally created for the 55th Venice Biennale in 2013, all characters are nameless; everyone's evolving identity and social standing is fluid and up for grabs across different animation stages. Interspersed with animations by Rhett LaRuehe, Item Falls is as un-linear, fractured, exhibitionistic, hypersexualised and exhausting to watch as all Trecartin's films.

"We clearly have no consciousness of the plastic mechanisms forming our personality and guaranteeing its continuity. Yet by trying to become conscious of them we may, Malabou proposes, acquire a new freedom, that of imposing our own organization on the world rather than submitting to the influences of a milieu. Plasticity, in effect, is not flexibility. Let us not forget that plasticity is a mechanism for adapting, while flexibility is a mechanism for submitting. Adapting is not submitting, and, in this sense, plasticity ought not to serve as an alibi for submitting to the new world order being dreamed up by capitalism."

Marc Jeannerod, Introduction to *What Should We Do With Our Brain?*
by Catherine Malabou (Fordham University Press, 2008)

Dafna Maimon, The She The Same, 2014
(installation 2021)

'The She The Same' is a part of a bigger homonymous project consisting of a short film, performance, and artifacts in which the experience of our "true other" is set parallel to phantom limb pain. By looking back at mythologies in which each human was once separated from his or her "other half" in the beginning of times, this "lost other" could be considered to be a phantom limb or body. This project, developed with the help of a neuroscientist, explores the way in which we construct our own bodies and those of our lovers.

How does the perception of these constructed "bodies" manifest in reality and affect our psychology even after their disappearance? Simultaneously the idea of a double body or our true other half is a convenient tool for the production of expectation, desire and the romantic industries such as the capitalist ventures that profit from the societal construct of romance and love.

Mangué Brain: Crabs With Brains as Collective Cultural Brains

by Bonaventure Soh Bejeng Ndikung

The intractable beauty of the world

What goes up from the chasm/abyss

It is a rumour of several centuries. And this is the song of the plains of the ocean.
The sonorous shells rub against the skulls, bones and green cannonballs at the bottom of the Atlantic. In these abyss there are cemeteries of slave ships, many of their sailors. The rapaciousness, the violated borders, the flags, raised and fallen, of the Western world.
(...)
But these deported Africans have broken down the barriers to the world. They too have opened up, with bloody splashes, the spaces of the Americas.
(...)
What remains of these formerly transborded, this silt from the abyss, is all the old worlds that have been crushed to give rise to a real new region. A world had flattened Africa. These Africas have impregnated the worlds from afar. This manifests and makes us understand le Tout-Monde (the Whole world), given in all, valid for all, multiple in its totality, which is based on this rumour of the abyss.[1]

Edouard Glissant, Patrick Chamoiseau. *Manifestes. La Découverte*. 2021

Since its founding in 1537 upon Portuguese colonization of that space called Brazil, Recife (the main anchor of sugar cane production through slave labour and harbour of the Captaincy of Pernambuco) is a remarkable site which has emerged from that *gouffre*, that abyss, that chasm, despite despicable violences has been able to manifest its intractable beauty. In the 1990s, the Manguebit movement in Recife stood for a musical revolt against the socio-political, economic and cultural stagnation, and for a resistance of the neoliberal capitalist agenda that had usurped most of Latin America. Manguebit advocated for a cultural memory that embraced all the attributes of the Glissantian *tout-monde* (the world in its entirety), "given in all, valid for all, multiple in its totality," and that opted for a way-out of the socio-economic cul-de-sac through a creolisation of sonic scapes and genres like makossa, Congolese rumba, reggae, coco, forró, maracatu, frevo, as much as rock, hip hop, electronic music, and funk. It is the Manguebit movement and its manifesto, "Caranguejos com Cérebro' (Crabs with Brains)," written in 1992 by singer Fred 04 and DJ Renato L and brought to life by two legendary bands (and two albums in 1994) with titles that betray their intentions: Mundo Livre S/A's "Samba Esquema Noise (Samba Noise Scheme)" and Chico Science & Nação Zumbi's "Da lama ao caos (From Mud to Chaos)," that are our foremost concern today.

The Manguebit manifesto, "Crabs With Brains," is a direct reference to the people of Recife who are colloquially referred to as crabs living in the mangrove. Crabs, like some other lobsters and shrimps, are known to be master navigators of their territories, even unknown territories, with a sophisticated memory. They have been found to have the cognitive capacity for complex learning despite their rudimentary brains. In the 2011 *Scientific American* article by Erica Westly, "Clever Crustaceans," it is said that crabs "can remember the location of a seagull attack and learn to avoid that area. In mammals, this kind of behavior requires multiple brain regions, but a study published in the June issue of the *Journal of Neuroscience* suggests that the *C. granulatus* crab can manage with just a few neurons." The experiments that neuroscientists at the University of Buenos Aires made to test the memory skills of the crabs showed that they could retain information for more than 24 hours, which is the clinical benchmark for long-term memory in most animals, including humans. Even more, crabs showed an ability to apply their acquired knowledge for their wellbeing and survival. The researchers attributed this behaviour to the crabs' lobula giant neurons that might have the possibility of storing information about different stimuli. It is known that crabs learn from their mistakes and crab mothers are said to be very caring and would place snail shells around their young ones to increase their calcium intake. Crabs are known to have a sense of compassion that leads them to protecting their territory and it is common knowledge that crabs are ambidextrous.

I am interested in the sophisticated social and cultural brain of the collective that embodies the ambidexterity, intelligence and prudence of the crabs as a way of being in the world. I am interested in that space of the mangrove that is evidence of solidarity, a coexistence of a variety of beings, plants and animals and mycelia, that mostly assist and subsist with each other – if left alone by the capitalist, colonialist, destructive kind of human. So, if such creatures with what we humans might call 'primitive brains' could exercise such proficients memories and such compassion, why can we humans with such complex brains not succeed in fulfilling our auto-crafted slogans like "nie wieder (never again)" after such horrendous atrocities that litter the course of human history, be it the Maafa or the holocaust?

A Symbiotic Brain

One could say my major concern here is of a collective cultural brain that goes beyond the human, a symbiotic brain that encompasses a plethora of beings; a symbiosis between humans and crabs, as much as all the other existences that make up the mangrove of Recife; a hybrid collective cultural brain that is birthed from the cycle of the human eating crabs, the human defecating in river, the crabs eating the faeces of humans to grow healthy for the humans to feast on the crabs again. This brain is crafted in the spirit of co-dependence and not the myth of singularity and individualism: a brain based on the cycle of defecation. And the medium of negotiation, of cultivation of this brain, is the mangrove. Mangroves are rich but precarious spaces in which life needs to be adapted to survive. To survive in the mangrove, beings must adapt to low oxygen intake, for example through their "breathing tubes" above water and the aerial roots that absorb gases directly from the atmosphere and other nutrients from the soil. To survive in the mangrove, beings must adapt to limiting salt intake by creating systems that keep 90-97% of salt taken up at the roots disposed of through the "sacrificial leaf." To survive in the mangrove, beings must adapt to limit water loss. To survive in the mangrove, seeds do not germinate in soil, but germinate attached to the parent tree before dropping into the water when mature.

It is this philosophy of the mangrove that also informs the Mangue brain, but the relationship between crab and humans that is central to the Manguebit movement was already described in Josué de Castro's seminal work, "Of Men and Crabs," published in 1967. By then, Josué de Castro had already earned fame for his path-breaking ecological work on the politics of hunger, "The Geography of Hunger" published in 1946. Being a physician in Recife, de Castro had done studies with workers' and declared that their "basal disease" was hunger that manifested itself clinically as anemia, protein-calorie malnutrition, and more. He linked the socio-economic realities of the people of Recife to their biological manifestation of hunger. In this later work, "Of Men and Crabs" written while in exile in Paris, he writes a fictional tale of poverty related to his childhood. With "Of Men and Crabs," de Castro narrates the tragic life of the young João Paulo. The story tells of the pathetic condition of all the people around the boy interwoven with the story of the priest Father Aristides whose craving for the guaiamu crabs is insatiable. In that space of exile, and hopelessness, de Castro gave a world a book that paints the reality of "the wretched of the earth." It is no surprise that the main character João Paulo disappears during a disastrous flood that literally erases the whole settlement. But what we take with us is, as de Castro writes, "humans fashioned of crab meat, thinking and feeling like crabs; amphibians, at home on land and in water, half-man, half-animal; fed, in their infancy, on that miry milk, crab broth."[2]

These relationalities of beings across land and waters, those in the swamps, so playfully and critically put forth by Mundo Livre S/A and Chico Science & Nação Zumbi, these relationalities between different genres, between gods and humans and other existences put forth by Mário de Andrade, these relationalities proposed by de Castro, these relationalities convoked by Glissant and Chamoisseau that mediate the rumours from several centuries ago to the rumours of today, that negotiate between the voices in the vault and the voices of those who are still surviving, these relationalities between those formerly transborded, those displaced and the perpetrators – all these relations speak to an exhaustive and resilient brain: the Mangue Brain. In, "Caranguejos Com Cerebro (Crabs With Brains)," Fred Zero Quatro and Renato L. structure the manifesto in a Mangue trilogy: The Concept, Manguetown – The City, Mangue – The Scene. What I am advocating for is: Mangue – The Collective Cultural Brain. If one thing is for sure, Mangue - The Collective Cultural Brain negates the Darwinian notion of survival of the fittest, or toxic competition, and advocates for collaboration and co-existence as the basis for the intractable beauty of the world!

1 L'intraitable beauté du monde
Ce qui remonte du Gouffre
C'est une rumeur de plusieurs siècles. Et c'est le chant des plaines de l'Océan.
Les coquillages sonores se frottent aux crânes, aux os et au boulets verdis, au fond de l'Atlantique.
Il y a dans ces abysses des cimetières de bateaux négriers, beaucoup de leurs marins. Les rapacités, les frontières violées, les drapeaux, relevés et tombés du monde occidental. (…)
Mais ces Africains déportés ont défait les cloisonnements du monde. Eux aussi ont ouvert, à coups d'éclaboussures sanglantes, les espaces des Amériques. (…)
Ce qui reste de ces anciens transbordés, ce limon des abysses, c'est tous les mondes anciens qui ont été broyés jusqu'à donner vrai lieu à une région nouvelle. Un monde avait laminé l'Afrique. Ces Afriques ont engrossé des mondes au loin. Cela manifeste et nous fait comprendre le Tout-monde, donné en tous, valable pour tous, multiple dans sa totalité, qui se fonde sur cette rumeur des abysses.

2 de Castro, Josué. *Of Men and Crabs*. Trans. by Susan Hertelendy. New York: Vanguard, 1970.

Warren Neidich, Brain Without Organs, 2021

The Brain Without Organs is a virtual simulation of a transitioning multicolored artificial neural network driven by data gathered from the responses of a fictive spectator wearing a Virtual Reality headset outfitted with brain-computer interface (BCI-VR) and eye tracking algorithms. This simulation is a dynamic presentation of a neural network changing in time. As the viewer interacts with the artificial neural network artwork, their choices will impact the morphology of the structure, analogous to what has been proposed for real neural networks by Nobel Prize winning neurobiologist Gerald Edelman termed Neural Darwinism. (WN)

“The new model of the brain progressively elucidated by modern neuroscience emerges in a particular context:it co-occurs with a radical modification of the economic and social environment. The look of capitalism has changed, passing from a planned system, managed from above and overseen by a central authority, to an auto-organization at once dynamic, multipolar, and adaptive to circumstance. This new model of organization clearly suggests an analogy with cerebral reality: “Like neuronal cohesion, contemporary corporate economic and social organization is not of a central or centralizing type but rests on a plurality of mobile and atomistic centers, deployed according to a connectionist model.” (42) Might we have a “neo-liberal” brain that would impose its model on our socioeconomic organization? Or, inversely, might the global economy’s upheaval generate a conceptual change that would affect, by contagion, our view of the way the brain functions?”

Marc Jeannerod, *Introduction to What Should We Do With Our Brain?* by Catherine Malabou (Fordham University Press, 2008)

This newspaper is published on the occasion of the exhibition: Activist Neuroaesthetics — Part 1—3, curated by Warren Neidich, Susanne Prinz and Jacquelene Drinkall. 1.5.—21.8.21

Exhibition photographs: Ludger Paffrath
Editors: Sarrita Hunn, Warren Neidich, Susanne Prinz
Design: Ccopy Shop, Font: Muto by Rade Matic
Print: Mundschenk Druck-und Vertriebsgesellschaft

Courtesies: John Armleder: the artist; Douglas Gordon: the artist; Dafna Maimon: the artist; Jeremy Shaw: the artist and KÖNIG GALERIE Berlin| London | Seoul; Alfred Ehrhardt: Alfred Ehrhardt Stiftung, Berlin; Warren Neidich, the artist and Galerie PRISKA PASQUER, Cologne; Tabita Rezaire: the artist and Goodman Gallery, London | Johannesburg; Lizzy Fitch & Ryan Trecartin: the artists and Sprüth Magers, Berlin / London / Los Angeles

Published by Kunstverein am Rosa-Luxemburg-Platz e.V., Linienstraße 40, 10119 Berlin
Funded by Haupstadtkulturfonds, SteDi Stiftung

HAUPT STADT KULTUR FONDS

STEDI STIFTUNG