

Activist Neuroaesthetics

Telepathy and New Labor



Exhibition

With works by Kathryn Andrews, Simon Denny, Suzanne Dikker and Marina Abramović, David Horvitz, Agnieszka Kurant, Jonathan Monk, Gianni Motti, Lorenzo Sandoval, and Suzanne Treister

Telepathy and New Labor is the final of three acts in an exhibition-play that unpacks and explores the potential of Activist Neuroaesthetics.

We are in the midst of a transition from an information and knowledge-based economy to one that can be described as neural or brain-based. Just as the burgeoning industrial economy subsumed craft and agricultural economies, and the information and knowledge economies of the late 20th and early 21st centuries subsumed the industrial economy, this imminent brain-based economy will subsume those that preceded it. The result will be that real subsumption in which life itself becomes work will be transformed into neural subsumption wherein our conscious and unconscious thoughts and impulses will become work.

Here, the brain not only refers to the intracranial brain that resides inside the bony skull, but also the situated body and the extracranial brain composed of the socio-cultural-technological milieu in constant evolution. Today these two systems are situated and intertwined with Big Data and what Shosha-

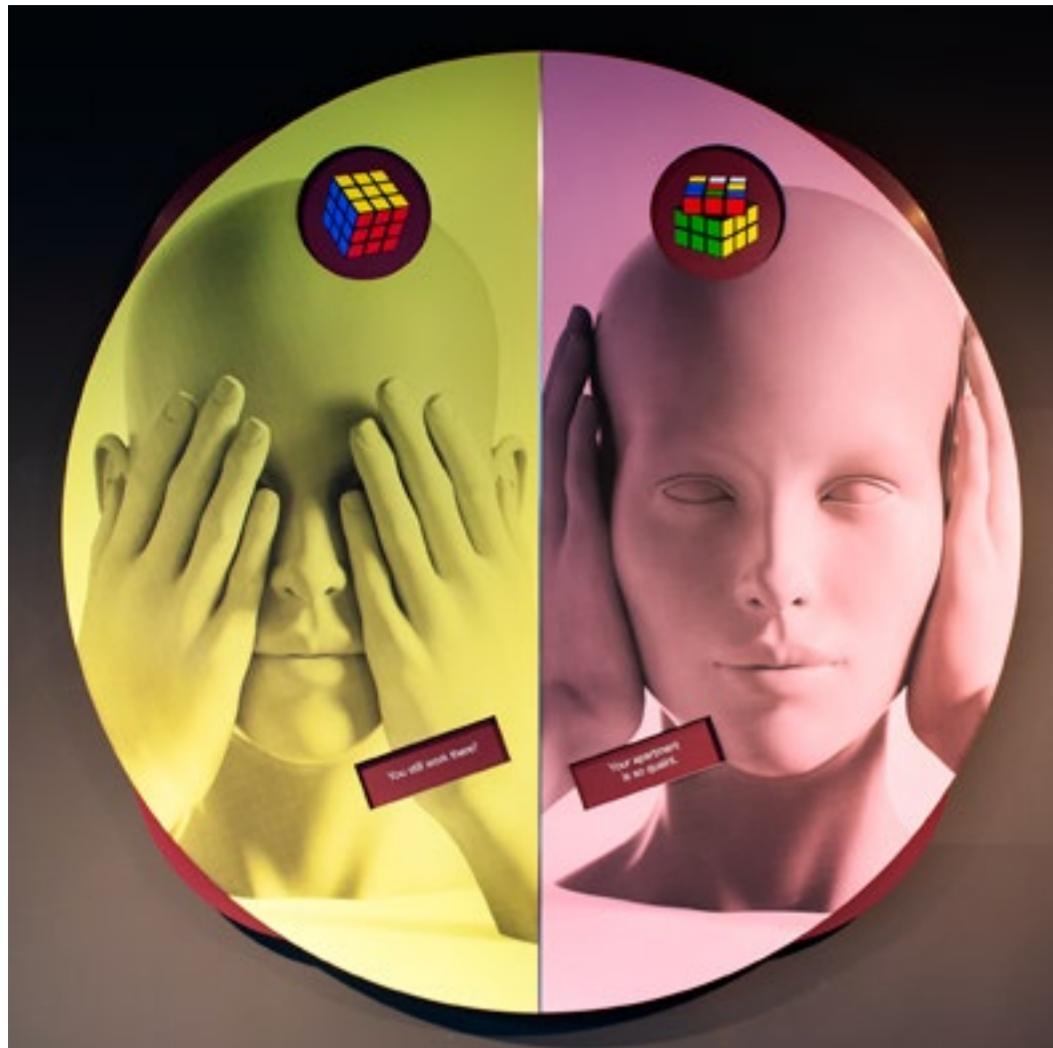
na Zuboff describes as the Big Other, “a ubiquitous networked institutional regime that records, modifies, and commodifies everyday experience from toasters to bodies, communication to thought, all with a view to establishing new pathways to monetization and profit.” This Big Other is found in what is referred to as Google Bubbles in which clicks of a mouse and online searches can directly affect our attitudes and political affiliations.

In this context, immanent telepathic neural technologies will advance telemetric technologies already in use to intercede between the intracranial brain and the extracranial brain. As Slavoj Žižek describes it in his book *Hegel in a Wired Brain*, the “‘Wired brain’ refers to a direct link between our mental processes and a digital machine, a link which, while it enables me to directly trigger events in reality with a mere thought...it also enables the digital machine to control my thoughts.” These technologies are appearing on the horizon in part due to advanced digital contingencies that require new speeds of mental laboring and levels of attention in order to produce increases in the surplus value of intellectual labor. As Elon Musk has said, “it’s mostly about the bandwidth, the speed of the connection between your brain and the digital version of yourself, particularly output,” in regards to this merger.

This exhibition is an attempt to make known the implications of the wired brain and its relations to new forms of labor. We ask: What might the effect of online searches (like those that feed into the system of the Big Other) be as a result of conscious and unconscious choices mediated by wired brain apparatuses? Furthermore, what new capacities might future assemblages of this kind have to intervene in the brain’s neurophysiology by directing the shape and form of its neural architecture through directly pruning its neural plasticity? And, what role can artistic interventions play in both increasing awareness and creating dissensus against the immanence of neural subsumption?

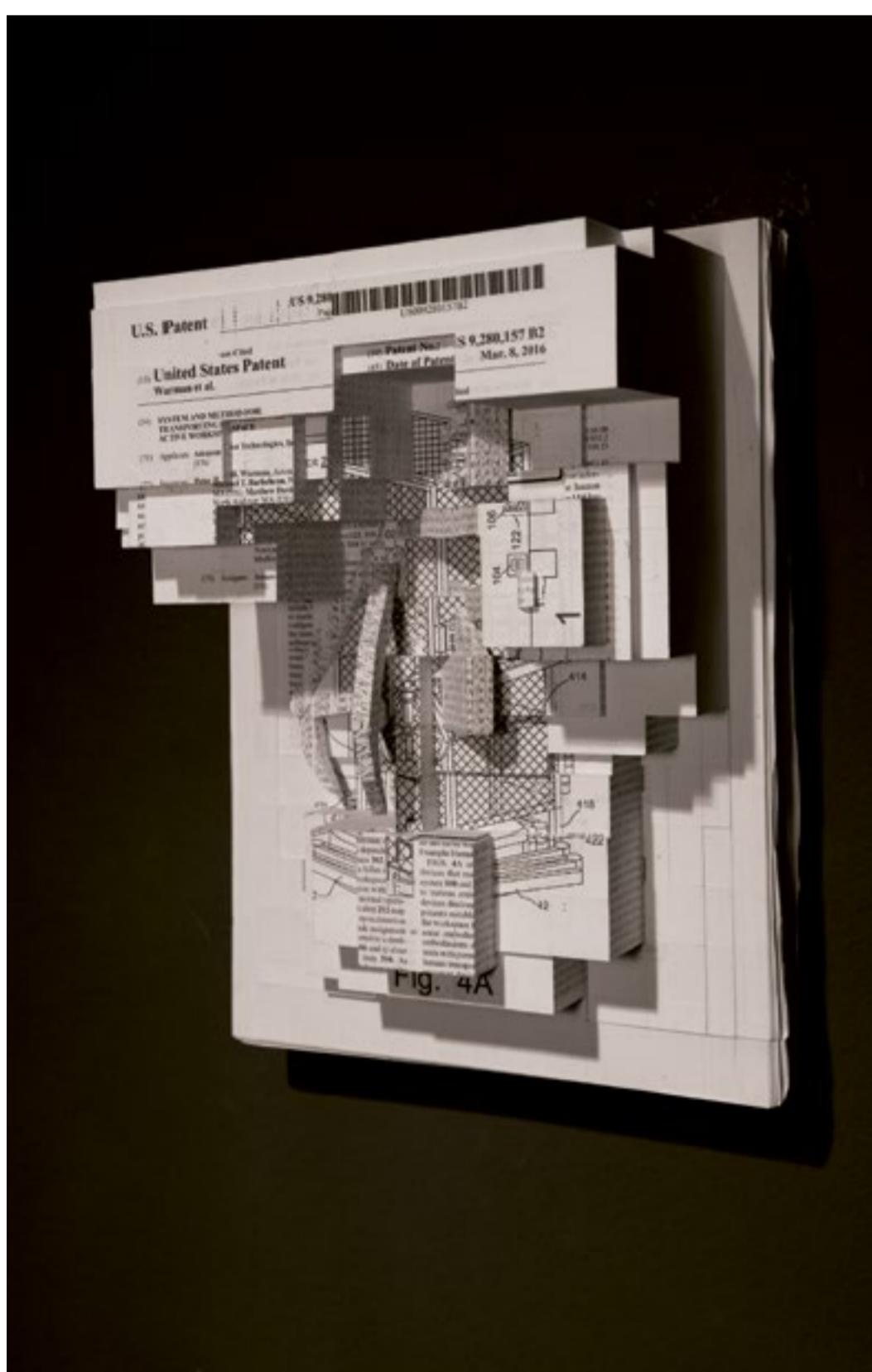
“A really efficient totalitarian state would be one in which the all-powerful executive of political bosses and their army of managers control a population of slaves who do not have to be coerced, because they love their servitude.”

Aldous Huxley, *Brave New World*



Kathryn Andrews, *Wheel of Foot in Mouth No. 5 (Game of Twelve)*, 2019

In 'Wheel of Foot in Mouth No. 5' the mirrored head of an antique male sculpture head fills symmetrical half-circular volumes reminiscent of a bicameral mind. At a position above the frontal cortex are pairs of dice appearing in a cut out window and at the side tangential to the face are short phrases also appearing in windows which can be administered by the public/spectator by manipulating two sets of circular gears that jut out from the works circumference. The roll of the dice represent a gesture of playfulness and a nod to contingency and chance and suggesting game theory as part of a complex assemblage of mindedness and self-reflexivity.

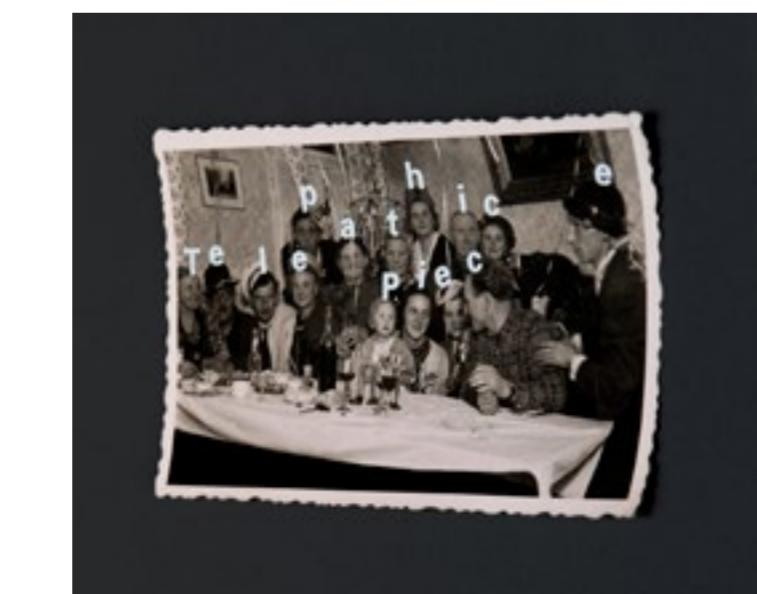


Kathryn Andrews, *Wheel of Foot in Mouth No. 2 (Rubik's Early Work)*, 2019

In 'Wheel of Foot in Mouth No. 2' two pastel-colored faces of apparently trans-human characters of the future are combined with four cut out windows, two of which showing Rubik Cubes, the others various short phrases. The futuristic mannequin like heads communicate something quite austere and distant and they see no evil and hear no evil. They seem insensate and their consciousness is one lacking sensibility and one which is determined by the motion of the unsolvable morphology of a 3-D multicolored sculptural puzzle. The bicameral set up is reiterated as alternative strategy of the rotation of the cubes or the random text selection.

Simon Denny, Document Relief 3 (Amazon Worker Cage Patent), 2019

The work is based upon a patent granted to Amazon.com in 2017. It is a patent that embodies the contemporary aspects of new labor concerned specifically with transporting personnel within an active workspace and resembles a cage to contain the e-commerce laborer. In cognitive capitalism the proletariat working aside and amongst other workers along an assembly line has been replaced by the cognitarium working alone in front of a screen lacking solidarity. The cage in many ways is metonymic for the conditions of isolated new labor and the precarious lifestyle.

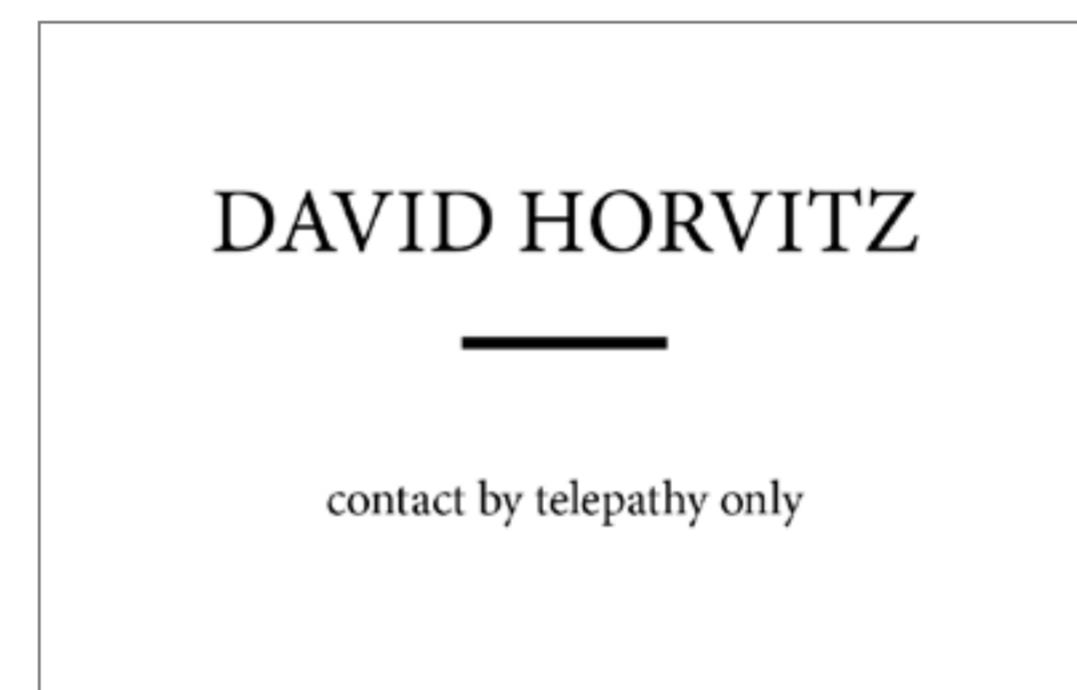


Jonathan Monk, *Keep Still (RB'69)*, 2000



Marina Abramović with Suzanne Dikker, *Measuring the Magic of Mutual Gaze* (2011) with Matthias Oostrik and the Watermill Art & Science: Insights into Consciousness Group.

Measuring the Magic of Mutual Gaze restages 'The Artist is Present' as an interactive art installation/neuroscience experiment with the goal to investigate the relationship between human connectedness and brainwave synchronization. Participants are engaged in a mixed scientific experiment and performance. Fit with the Emotive EPOC wireless EEG headsets they sit opposite and confront each other for 30 minutes all the time engaging each other through eye contact. During this interval the subjects mental state and synchronized EEG activity is monitored and superimposed upon two rotating 3D brain models displayed on a large screen behind them. Greater brainwave synchronization is reflected as vivid and more coherent while lack of synchronization is represented as dark audio-visual chaos.



David Horvitz, "contact by telepathy only", 2013 - ongoing, (version 2021)

The artist calls his works „chronicles of reality, or chronicles of the imagination“ Fittingly several of Horvitz' works touch upon telepathy employing the term as an equivalent to concepts of art coined in the 1960th, giving those one further twist. „contact by telepathy only“ is strongly related to one of his own telepathic pieces where he will think about people for one minute for one US dollar. Both works relate to Robert Barry's famous early conceptual work ‚Telepathic Piece‘ (1969) in which Barry communicates an artwork by non-verbal means and content. A significant difference being that Horvitz outsources the creation of the work to the viewer.



Gianni Motti, *Farady Caps (6 aus einer Ed. Von 100)*, 2021

Motti believes that "... what the system is most afraid of today is not people going on a strike – because that still gives it power – but rather our ability to create our own reality using the power of our minds." He then adds: "Putting our minds to use is a true revolutionary act today". The artist's long interest and investigation of Telepathy resulted in a series of telepathic séances with the audience invited to participate and bring a unified mental attention to and attempt to influence or destabilize their governing organizations.



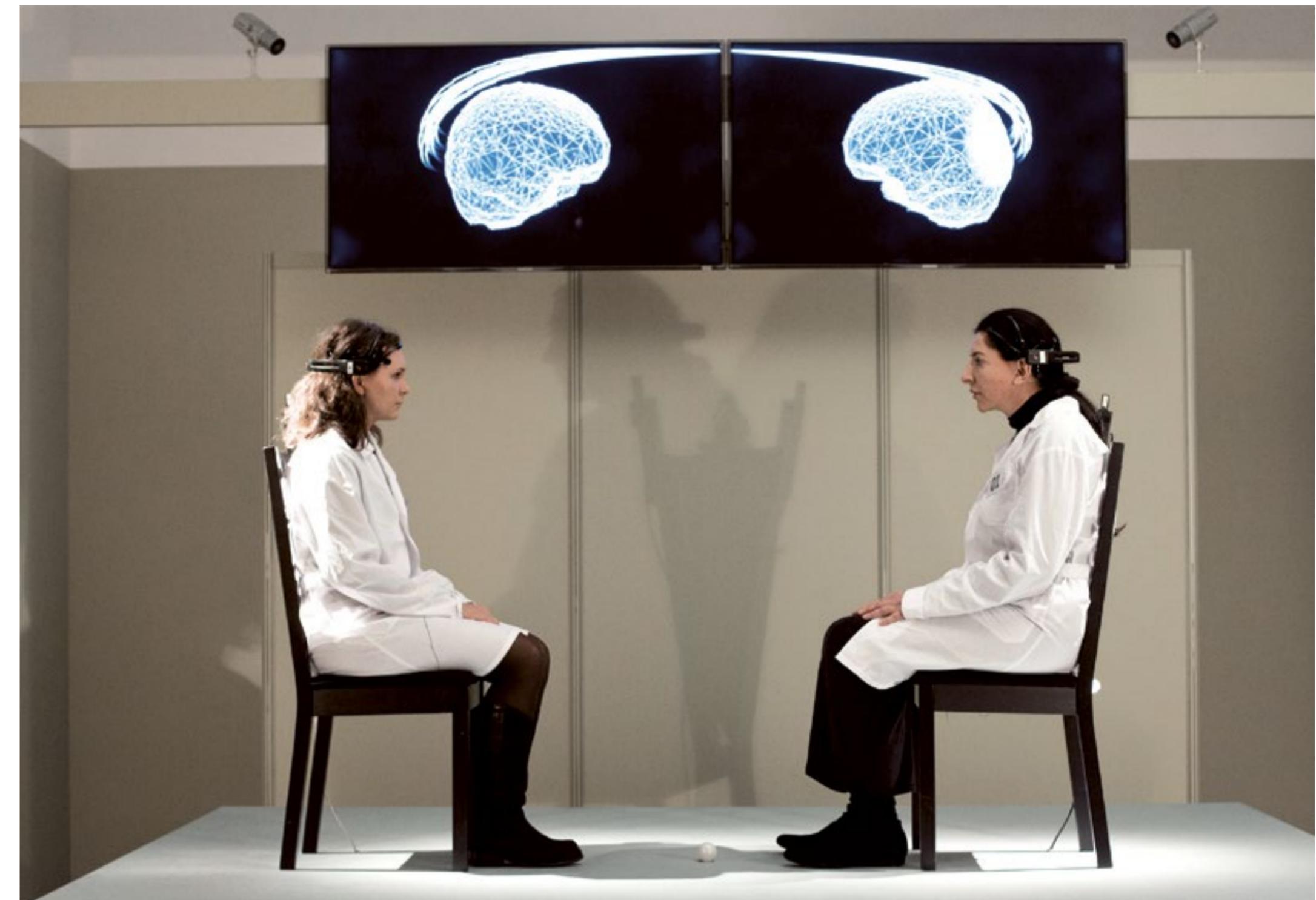
Jonathan Monk, Translation Piece, 2002

Jonathan Monk documents a series of successive translations of a description of Robert Barry's immaterial Telepathic Piece (1969) 'During the exhibition I will try to communicate telepathically a work of art, the nature of which is a series of thoughts that are not applicable to language or image' so that the final confused statement becomes, after passing through a number of commercial agencies, gibberish, albeit one that introduces consciousness and the soul into the text.



Lorenzo Sandoval, A Federative Mind, 2021

"A Federative Mind" is a newly commissioned work for "Telepathy and New Labor". The work is a collage with found and own footage from the artist that interweaves playfully the notions of telepathy, interdependence, and diagrams in three chapters. This new piece continues the research of the artist on the relationships between anarchism and technology. Sandoval assemble a genealogy that connects the developments of technology towards telepathy with the Californian New Communalists, with their biased construction of the cybernetic culture that influence Silicon Valley til today. The work proposes divergent feedings for future developments of the algorithmic technology behind telepathic systems based on anarchist organizational diagrams of the 30's, and textiles-as-text from Peru and Mali, in order to imagine a possible federative mind.



Doppelgangers and the Third Force: The Artistic Collab- orations of Gilbert & George and Marina Abramovic/Ulay

by Charles Green

In both teams' performances, the artists folded themselves into an elusive extra identity: the double body of the collaborative artist. Gilbert & George dressed alike and, with metallic facial paint on, looked alike. Abramovic/Ulay's bodies changed dramatically during their collaboration. According to many observers, they became remarkably similar in appearance, even though they made a work highlighting the differences between their physiques, Communist Body-Capitalist Body (1979). In fact, they looked and behaved almost like twins: they were both tall, muscular, athletic, and long-haired and dressed in similar clothes.⁽²⁶⁾ In Relation in Time and Breathing In-Breathing Out (both 1977), they effectively presented themselves as joined halves of a double being, like Siamese twins. In addition, they had met on their mutual birthday. Abramovic/Ulay were well aware that they were re-creating themselves as doubles—that they were moving beyond conventional gender-based markers of identity at the same time that they were attempting to develop faculties such as telepathy through sensitization processes. In public lectures after their collaboration had ended, they described the collaboration as symbiotic, emphasizing the absolute trust that had been necessary to produce their works. Just as Abramovic/Ulay, through extreme self-absorption, spectralized

their bodies, so their collaborative body became their real body, for their corporeal bodies had been stripped of normal significance, like shadows. Their collaborative work implied a phantom body—an apparitional third entity created by the two artists—and the nature of this entity, either in the "safe house" of the art gallery or the world outside, was uncanny, for the distinction between the real and the phantasmic was blurred. Their individual identities were marginalized, spectralized, or became progressively and deliberately less accessible. In this, the team's evolution resembled that of Gilbert & George. Asked why they made a point of not distinguishing their separate contributions to the collaboration, George replied, "Well, it's not based on that. It is 'us' doing it together."⁽²⁷⁾

There is a linked proposition—that the body constituted in artistic collaboration was a phantom extension of the artists' joint will, rather like a phantom limb. In Volatile Bodies, Elizabeth Grosz explains the phenomenon of a phantom extension of the will. She suggests that "The phantom limb is a libidinally invested part of the body phantom, the image or Doppelganger of the body the subject must develop if it is . . . to take on voluntary action in conceiving of itself as subject."⁽²⁸⁾ Grosz offers a way of theorizing the collaborative artist formed by the teamwork of two or more artists—the artists' phantom appendage or third hand. Although this is a familiar proposition about collaboration and teamwork, it is more than a poetic metaphor. In the cases of both Gilbert & George and Abramovic/Ulay, artistic collaboration was an aesthetic gesture born of free choice. It was a way of acting freely rather than capitulating to circumstance, training, or expectations. Perhaps it was also a way of seeing the limits of the artistic self clearly. In the case of artists who were also actors in their works, it was a way of having the artistic self made available for self-scrutiny. Grosz observes that human subjects are never able to see their own bodies completely. While hands and legs may be visible, for example,

Making of the „Neuroscience Experiment I: Measuring the Magic of Mutual Gaze“ (2011)

Performed by Marina Abramović and Lynsey Peisinger
at Marina Abramović: The Artist Is Present
Garage Center for Contemporary Culture,
Moscow, 2011

the small of the back cannot be seen. The out-of-body, synchronistic visions of psychics—who say in trance they see their bodies from above and from several sides at once—sometimes enable a point of view of the whole body. In collaboration, however, the creation of another synthesized subject seems to suggest that the impossible idea of a unified body-image may be almost magically attainable by the conjunction of complementary parts: Abramovic reported that during the extended silences of Nightsea Crossing, she had the sensation of seeing in every direction around her, as if every pore of her body could see, and of developing a spectacularly magnified, all-encompassing sense of smell.⁽²⁹⁾

26. This, at least, is my recollection of their Australian performances, confirmed by others, including Australian curator Jennifer Phipps, in whose Melbourne houses they stayed for several weeks upon their return from the desert.

27. Gilbert, in Michelle Helmrich, "Gilbert & George Interviewed," *Eyeline* (Brisbane), no. 24 (Autumn-Winter 1994): 17.

28. Elizabeth Grosz, *Volatile Bodies: Towards a Corporeal Feminism* (Sydney: Allen and Unwin, 1994), 41–42. 29. Abramovic, telephone conversation with the author.

30. Bojana Pejic, "Being-in-the-Body: On the Spiritual in Marina Abramovic's Art," in Friedrich Meschede, ed., *Marina Abramovic* (Berlin: National Gallery and Stuttgart: Edition Cantz, 1993), 26.

31. See Nathan Katz, "Prasanga and Deconstruction: Tibetan Hermeneutics and the Yana Controversy," *Philosophy East and West* 34, no. 2 (April 1984): 185–203; see also Kevin Hart, *The Trespass of the Sign: Deconstruction, Theology and Philosophy* (Cambridge: Cambridge University Press, 1989).

This text is an excerpt from "Doppelgangers and the Third Force: The Artistic Collaborations of Gilbert & George and Marina Abramovic/Ulay" by Charles Green (Art Journal 59 (2), Art Journal 59 (2), 2000, p. 36–45).

Zaum and Technomaya. After The Future.

By Franco 'Bifo' Berardi

The poetics of Khlebnikov may be viewed as a utopian and anticipatory appreciation of the new reality of language in the age of media tech. He was the prophet of late century cybersulture, and the utopian thinker of the mix of technology, transmortality, and psychedelics. He created the word "Zaum", transmortal emotional language, referring to the ability to transfer meanings without need of any conventional linguistic symbols.

This issue was sharply perceived by the Symbolist poets. Since the end of the 19th century, Symbolist poets tried to overcome the linguistic limit to interpersonal comprehension and looked for a form of communication freed from semantic convention. The point of arrival of the Symbolist poetical school is the notion of transmortal language. Mallarmé seeks a poetics able to transmit emotion rather than meaning. The Mallarméan concept of emotion must be understood in a sense that has nothing to do with any romantic and decadent suggestion. Mallarmé writes in a letter ("Lettre à Cazalis", 30 October 1864) that symbolism is "une poétique très nouvelle, qui peut peindre non la chose mais l'effet qu'elle produit." To paint, he says, not the thing, but the effect produced in the mind of the receiver of the message. His intention is far from the tardo (late)-romantic aura: the emotional effect Mallarmé is talking about is the transmission of mental states. The action of color, of phoneme, image and word is intended to work as mental change, as neurological emotion, as synesthetic telepathy.

Khlebnikov had been influenced by Symbolist poetics before joining the Futurist movement in the roaring years of the Revolution. The affinities between Symbolism and Futurism are much more interesting than their differences. Khlebnikov, who loved to travel by train all around Russia, and who loved the archaic ways of life like the magical-shamanistic practices of deep, traditional Russia, wanted to create a language virtually planetarian, able to be

understood beyond linguistic boundaries, and he called this language Zaum ("beyond sense"), meaning a transmortal emotional language. Angelo Maria Ripellino (1978: 93) points out that "Futurism has two faces. On one side it emphasizes technology, skyscrapers, machines; on the other side it's moved by the troglodytes, the wild, caves, and the stone-age; and so it opposes the sleep of a pre-logic Asia to the modern European metropolitan frenzy". Here we are on ambivalent ground, open on two different sides: Zaum is seduced by

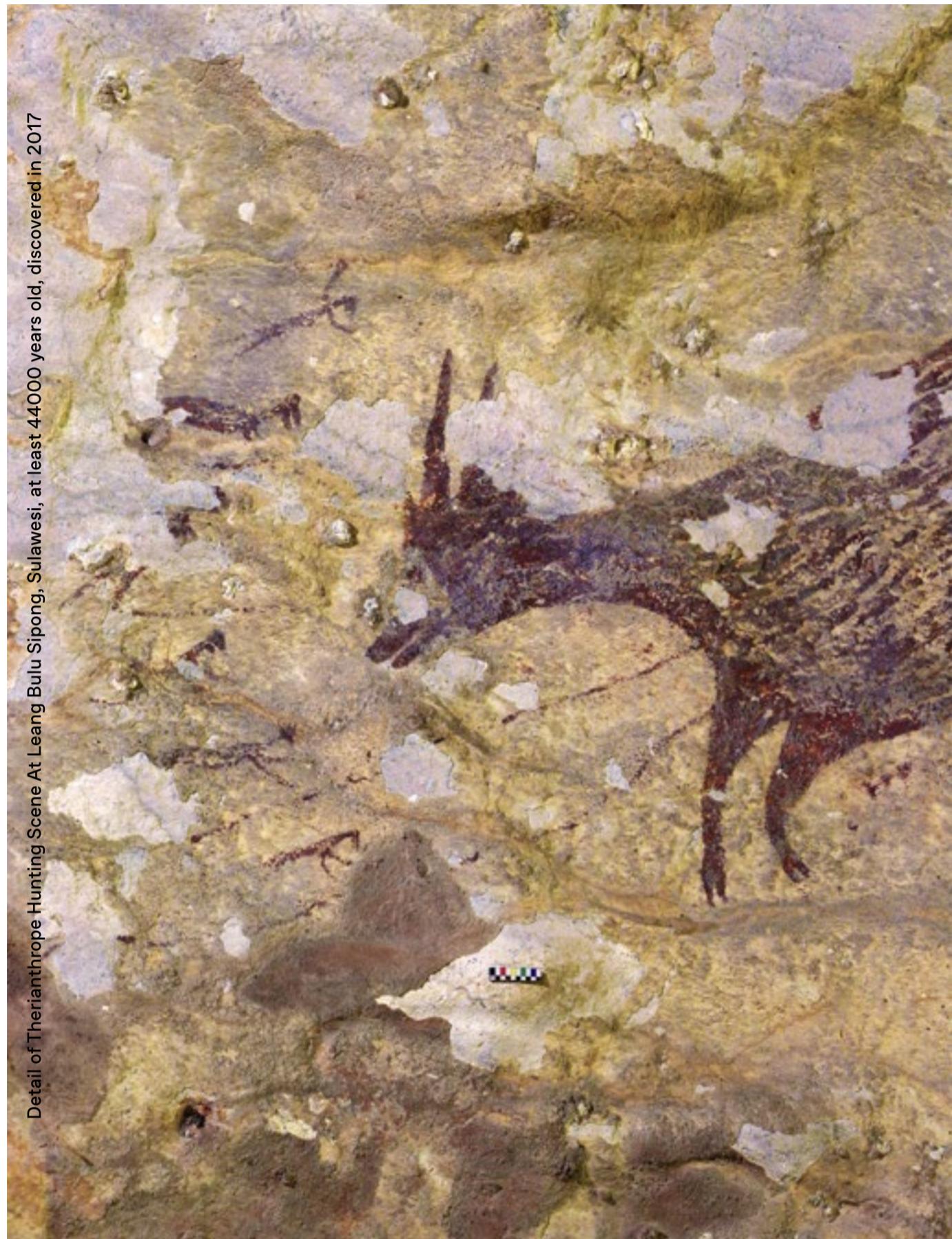
pre-symbolic forms of communication, the original protolinguistic vocality, the language of original emotions. But at the same time, it is predisposed to imagine the possibility of a post-symbolic communication, i.e., a telepathic technology; in that sense we see Symbolism and Futurism converging towards the imagination of linguistic utopias, merging archaism and futurism.

Khlebnikov is charmed by the enchanting virtues of sounds, by the phonetic sorcellerie [witchcraft]: "Faith in witchery of phonemes, interest in the shamanic culture, research of a ritual language, this is the symbolist influence: poetry is a magical action, and an oracular message. Many poems by Bal'mont, Bel'ij, Blok are conceived as means of magical action, similar to witches balms, animal brains, snake skin, Savina leaves and belladonna or datura and so on" (op. cit.).

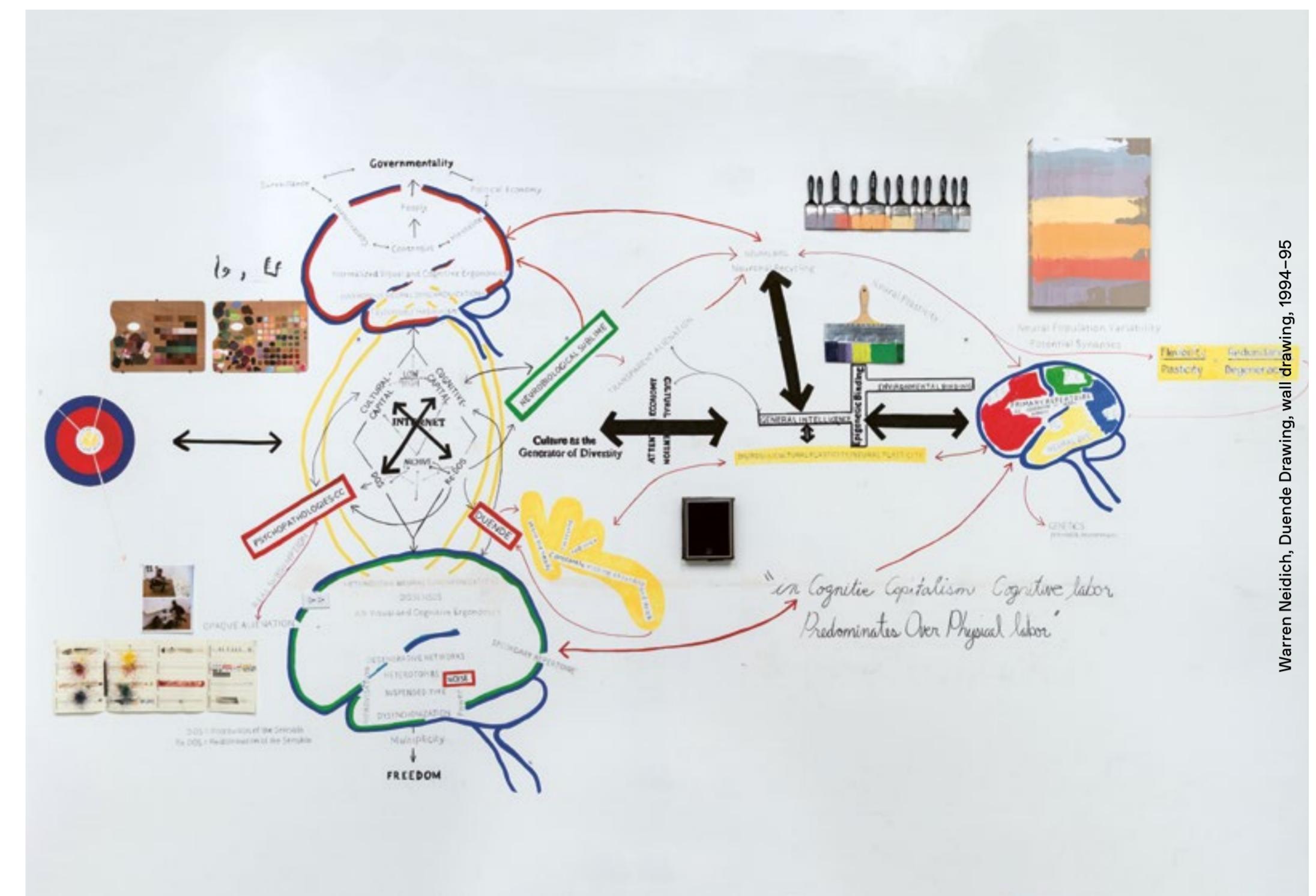
Khlebnikov turns his back on the European modern world, notwithstanding his futuristic flirtations, preferring eternal Asia, and he dives into the "etymological night," into the depthness of a past that is prodded towards imaginary origins. In this magical background he sees the possibility of a telepathic effect of trans-

mission of meaning without the mediation of a conventional signifier, through the direct stimulation of neurological emotions corresponding to meaning. The Khlebnikov way leads to pre-symbolic communication, but this way must converge with post-Symbolic research, which is today our task. Khlebnikov seems to be the point of connection between the two directions. The aim of Khlebnikovian transmortal language is to find a non-conventional dimension of communication through travel à rebours in the nocturnal territory of etymologies and origins; but now we progress towards the same end through the dangerous experimentation of telepathic techniques.

This is an excerpt from Zaum and Technomaya in After The Future by Franco Berardi 'Bifo', edited by Gary Genosko and Nicholas Thoburn, translated by Arianna Bove, Melinda Cooper, Erik Empson, Enrico, Giuseppina Mecchia, and Tiziana Terranova. (Edinburgh: AK Press, 2011), p.20-25, here 20-21



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Neuronal recycling hypothesis, exaptation and telepathy

by Warren Neidich

Neuronal recycling hypothesis, exaptation and telepathy

So, how might a dedicated telepathic module, cognit, or network develop in the intracranial brain while linked to an accelerating evolving technological counterpart in the extra-crani brain? In this section, I explore Dehaene's "neuronal recycling hypothesis", in which a dedicated module for reading and writing is believed to have evolved in the 5,000 years since the invention of writing on Sumerian tablets. This theory is a form of what Gould and Verba have called 'exaptation'. In exaptation, a trait like bird feathers, first evolved for the purpose of warmth, progressed to be used in flight (Gould and Verba 1982). Dehaene's theory of neuronal recycling explains how reading and writing colonised what became the visual word-forming area of the left temporal lobe. A similar process might be applied to create a dedicated module for telepathy. We are experiencing a confluence of cultural, technological and sociological relations with neural material consequences; might their intense interrelation combine to form the necessary evolutionary pressures to modify an existing predisposition of the brain to generate new forms of telepathic cognitive behaviours? Neuronal recycling is based on the idea that novel cultural or cognitive processes invade cortical areas initially devoted to different functions (Dehaene 2007). The cortical architecture presents hindrances prior to learning, but, through neuronal recycling, novel functions may be acquired, so long as they find a suitable cortical area to accom-

modate them, an area referred to as a cognitive function's "neuronal niche" (Dehaene 2015). The novel cultural function must locate a cortical area whose prior function is similar and plastic enough to accommodate it. In the human brain, this area is called the visual word form area and is located in the lateral temporal locus near the fusiform gyrus, dubbed 'the brain's letterbox'. For example, reading rests upon primitive neuronal mechanisms of primate vision for object and facial recognition that have been preserved over the course of evolution. Collectively, these neurons contain a stock of elementary shapes whose combinations can encode any visual object. In some individual macaques, neurons even respond to line junctions resembling our letter shapes (Dehaene 2015). According to the 'neuronal recycling' hypothesis, when we learn to read, part of the neuronal system converts to the new task of recognising letters and words. What does this mean for telepathy? The scientific data on the human telepathic powers is still meagre, although a telepathic module in the area of the parahippocampal gyrus, important for visualising environmental scenes like cityscapes and landscapes, has been reported (Venkatasubramanian 2008). That notwithstanding, recent interest in technologically mediated telepathy via cortical modems, BCIs, and neural dust has translated into a tremendous amount of capital flow being directed toward the investigation of telepathy. The need for increased brainpower in cognitive capitalism is expressed succinctly in the title of Gates' 1999 book *Business @ the Speed of Thought*. In concordance with Moore's Law – that computation power doubles every two years – (Neidich 2019) we can only assume that the technologically supported telepathy will develop exponentially. Following Deacon's example of reading in writing in *The Symbolic Species, The Coevolution of Language and the Brain*, I hypothesise that telepathy will find its way into activities such as driving a car, communicating with another person, playing video games, or shopping online. It will integrate our brains into the Internet of Everything. Here is how Deacon expresses it: "once symbolic communication became even

This is an excerpt from Warren Neidich, "Neuronal recycling hypothesis, exaptation and telepathy" in *Epilogue: Telepathic exaptation in late cognitive capitalism: A speculative approach to the effects of digitality*, edited by Natasha Lushetic, Big Data - A New Medium?, by Warren Neidich (Abingdon and New York: Routledge, 2021).

Beyond Technology: Juan Downey's Whole Earth.

by Julieta Gonzalez

Dropping out

By the mid-1970s we can see Downey's work increasingly veering towards the systemic relation between ecology and politics highlighted in *Make Chile Rich*. Concepts such as the telepathic connection of minds, indebted to Pierre Teilhard de Chardin, but also to Marshall McLuhan and Buckminster Fuller, feature prominently in his writings of the period, bringing him closer to the techno-mysticism promoted by *The Whole Earth Catalog*. (24) In his analysis of the relations between counterculture and cyberculture that led to the digital revolution, scholar Fred Turner argues that for those in the late 1960s and early 70s who set out to establish communes, from homesteaders to back-to-the-landers, all of whom he identifies as 'New Communalists', and 'for much of the broader counter-culture, cybernetics and systems theory offered an ideological alternative.' (25) For Downey, too, visions of 'cybernetic technology operating in synchrony with our nervous systems' presented a seemingly viable 'alternative for a disoriented humanity'. (26)

Central to Downey's technological agenda was a critique of state and capital. His writings echo Fuller's disavowal of labour in a technological society and his ideas regarding the end of sovereignty, as well as Shamborg's ideas for new forms of political and social organisation, which included the death of politics, techno-evolution or the shift from product to process and from industrial to information and meta-service economies. They recall, too, Brautigan's dream of a 'cybernetic ecology / where we are

free of our labours / and joined back to nature, / returned to our mammal / brothers and sisters, / and all watched over / by machines of loving grace.' (27)

However, the Video Trans Americas experience, his relation to CAyC and his engagement with the social realities of Latin America drove Downey in another direction — to a place beyond technology. Although unifying the indigenous cultures of the Americas through the agency of video feedback had proved an unfeasible enterprise, the journey yielded the realisation that alternative modes of existence that superseded the Western concepts of state and capital were not only possible but in fact existed among the so-called primitive peoples of the Americas. (28)

It is at this moment, and profoundly influenced by Pierre Clastres's *Society Against the State* (1974), that Downey decides to live among the Yanomami of the Venezuelan Amazon between 1976 and 1977. Motivated by his interest in self and otherness as well as in what he called 'the blueprints of power', (29) Downey, like Clastres, was concerned with understanding the biological and cultural roots of political power — what Clastres calls its 'birthplace and raison d'être'. (30) Clastres's reference to self-regulation among social groups in the animal kingdom must have been of particular resonance to Downey, as it not only suggests an analogy to indigenous societies but also to the cybernetic notion of homeostatic, self-regulated and transversal societies promoted by the techno-utopians of the counterculture.

We could thus surmise that it was there, in the midst of the jungle, that Downey found the cybernetic utopia he had been looking for throughout his entire life as an artist. The architecture of the shabono, the communal dwelling of the Yanomami, revealed itself to Downey as the most perfect expression of a cyclical and ecological architecture. The circular lean-to structure, built with the leaves and branches

of the trees felled down to make a clearing in the forest, its 'posts' and 'beams' tied with fibrous palm leaves, naturally disintegrates every two or three years. It is then abandoned and the tribe moves to another spot in the forest to make a clearing and begin the process all over again. Aside from its function as shelter, the shabono regulates the social structure of the Yanomami; there are no hierarchies, and families are distributed around hearths placed along the shabono's circular frame — the 'circle of fires' — while the collective and ritual activities take place at the centre of the structure, open to the sky and the elements. (31)

24. See J. Downey, 'Technology and Beyond', in *Radical Software*, vol.2, no.5, 1973, and 'Architecture, Video, Telepathy', op. cit.

25. Fred Turner, *From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network and the Rise of Digital Utopianism*, Chicago: Chicago University Press, 2006, p.38.

26. J. Downey, 'Technology and Beyond', op. cit., pp.2—3

27. R. Brautigan, 'All Watched Over By Machines of Loving Grace', op. cit.

28. In May 1975, Downey writes: 'The Video Trans Americas black-and-white expeditions have been completed. Like a chemical catalyst I expected to remain identical after my video exchange had enlightened many American peoples by the cross-references of their cultures. I proved to be no real catalyst, for I was devoured by the effervescence of myths, nature and language structures. Pretentious ashole levelled off!! Only then did I grow in creative and manifold directions. Me, the agent of change, manipulating video to decode my own roots. I was forever deciphered and became a true offspring of my soil, less intellectual and more poetic. An unexpected level had been reached among the strange roads of the heart!' See J. Downey, 'Travelogues of Video Trans Americas, 1973—75', op. cit.

29. J. Downey, 'The Blueprints of Power: A Documentary on Permanence and Transition in the Architecture of the Indians of the American continents', unpublished proposal for public TV documentary, August 1987, available at: http://www.fundaciontelefonica.cl/arte/downey/archivos/THE_BLUEPRINTS_OF_POWER20100405115952.pdf (last accessed on 29 July 2014).

30. Pierre Clastres, *Society Against the State: Essays in Political Anthropology* (1974, trans. Robert Hurley and Abe Stein), New York and Cambridge, MA: Zone Books and the MIT Press, 1987.

31. Circle of Fires is the title of both a 1979 installation by Juan Downey and a 1976 book by anthropologist Jacques Lizot, translated into English as *Tales of the Yanomami: Daily Life in the Venezuelan Forest* (1976, trans. Ernest Simon), Cambridge: Cambridge University Press, 1985.

This text is an excerpt from *Beyond Technology: Juan Downey's Whole Earth* by Julieta Gonzalez. After all Journal 37. October 2, 17-27, 2014.

iHuman: Blurring the Lines Between Mind and Machine

by The Royal Society

What could be gained from neural interface technology? VISIONS

The neural revolution could be part of driving advances in human well-being that exceed those brought about by the industrial and digital revolutions. In the medical world, neural interfaces could be transformative. People with paralysis or missing limbs could use brain-controlled prosthetics to bypass damaged limbs, spines or nerves. Surgery could become more effective, with precision robots used to perform increasingly complex tasks. Pain could be alleviated by electrical stimulation; sight and hearing restored or enabled for the first time by sophisticated implants. Mental health conditions could be treated by using interfaces to target relevant parts of the brain, bringing relief to the hundreds of millions worldwide who have depression (3). Even Alzheimer's disease, which has proved resistant to conventional therapies, might be halted or reversed (4). In the broader sphere of health and fitness, people could undergo 'whole brain diagnosis' to identify their unique talents and challenges. Today's 'brain training' computer games, whose impact is debated, might give way to demonstrably effective 'brain cleaning' or 'mind gym' sessions to keep minds sharp and creative. Monitoring of health indicators and neurostimulation could prompt people to exercise, possibly assisted by

direct muscle stimulation. Neural interfaces offer myriad possibilities to enhance everyday life. We could use our minds to open doors, turn on lights, play games, operate equipment or type on computers. Then there are opportunities to enhance or supercharge the brain itself. Implants, helmets, headbands or other devices could help us remember more, learn faster, make better decisions more quickly and solve problems, free from biases. Training could be transformed by the ability simply to 'download' new skills. Neural devices that help students to concentrate, remember, learn and decide could raise educational achievement levels and widen opportunity. If the technologies were affordable and available to all, then such technologies could support several of the UN Sustainable Development Goals.

Linking human brains to computers using the power of artificial intelligence could enable people to merge the decision-making capacity and emotional intelligence of humans with the big data processing power of computers, creating a new and collaborative form of intelligence. People could become telepathic to some degree, able to converse not only without speaking but without words — through access to each other's thoughts at a conceptual level. This could enable unprecedented collaboration with colleagues and deeper conversations with friends (5). Not only thoughts, but sensory experiences, could be communicated from brain to brain. Someone on holiday could beam a 'neural postcard' of what they are seeing, hearing or tasting into the mind of a friend back home. Alternatively, people might choose not to undertake some activities physically at all and instead experience them virtually through images, sounds, smells, tastes and sensations fed into the brain — from

meals to parachute jumps. Implants could become body parts, as pacemakers or artificial hips are today. Mood, knowledge and memory could be securely and confidentially backed up or uploaded to a digital cloud. Interfaces attached to animals or birds could enable experiences such as virtual flight. Mentally and physically enhanced military or police personnel could protect the public by being able to see more effectively in the dark, sense the presence of others and respond rapidly. Fire-fighters, paramedics and other public protection workers could benefit from enhanced perception and focus, operating as members of an integrated team with access to the same data and imagery as control room staff. People who work in hazardous environments could optimise their performance by training in immersive simulations, and in the service sector, people who have caring needs could be empowered to live more independently if they were enabled to command robots using brain signals while having their mood monitored remotely.

3. World Health Organisation. 2018 Factsheet on depression. See <https://www.who.int/news-room/fact-sheets/detail/depression> (accessed 7 February 2019).

4. Huang C et al. 2019 The neuroprotective effect of deep brain stimulation at nucleus basalis of Meynert in transgenic mice with Alzheimer's disease. *Brain Stimul.* 12, 161–174. See <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC681106/> (accessed 7 February 2019)

5. Urban T. 2017 Neuralink and the brain's magical future. *Wait But Why*, 20 April 2017. See <https://waitbutwhy.com/2017/04/neuralink.html> (accessed 7 February 2019).

This is an excerpt from "What could be gained from neural interface technology? VISIONS" in *iHuman: Blurring the Lines Between Mind and Machine* by The Royal Society. London: The Royal Society, 2019.



Jacqueline Drinkall, Hypnosis in Media for Brain Computer Interface, interactive video, Emotiv bio-neuroheadset for participatory viewers, live feed camera, computer and hardware, computer programming by Warren Armstrong, 2016

All that is Solid: speculative, quantum and cognitive aesthetics of telepa- thy and telekinesis

by Jacqueline Drinkall

Telepathologies of Cognitive Capitalism: Immaterial Labor of Activism, Culture, and Cognition

It is no mistake that Dikker came to collaborate with Abramović via her neurocognitive research into eye tracking being linked to language skills, brain synchronicity, and social production of common ground. The visual word form area associated with reading and writing skills, located at the posterior of the human brain, is analogous to the infero-temporal section of the macaque monkey's brain that is associated with numerosity, and this leads Dahaene to conclude that, in humans, the older technology of primate communication has been colonized by the cultural evolution of socially learnt reading and writing language codes. [36] Dahaene's "Neuronal Recycling Hypothesis" explicitly links bio-neuro-cultural neuroplasticity to the preemptive, predictive mechanisms of the human brain, or what Abramović and experimental artists such as Neidich refer to as 'telepathy.'

Maurizio Lazzarato's operaist theories of action at a distance operating in societies of control are central to much of Neidich's thinking about immaterial labor and cognitive capitalism, as well as to Neidich's collaborative peers publishing in his *Psychopathology of Cognitive Capitalism* publications. Lazzarato extends social theorist and criminologist Gabriel Tarde's theories of telepathy of society and crowds, very similar to those of Le Bon and Mauss, mentioned above.

Lazzarato is a theorist of immaterial labor who explores how the human mind is constantly doing physical work. Lazzarato's descriptions of how modulations of power and mechanisms of social control are distributed and telecommunicated in society are highly suggestive of telekinesis, and he uses the term 'action at a distance' a number of times. For example: "In the societies of control, power relations come to be expressed through the action at a distance of mind on another, through the brain's power to affect and become affected, which is mediated and enriched by technology." [37] Supporting this alignment of telekinesis with cognition is Lisa Blackman's book *Immaterial Bodies*, which reasserts the telepathic foundation of affective phenomena and contemporary affect theory. [38] Blackman argues that consciousness and extended cognition are a form of telekinesis, a concept that resonates with Neidich's interest in neuroplasticity and oscillatory dialogue with the environment through epigenesis. [39] The transformative process of epigenesis, or symbiotic gene/culture evolution, works like a cybernetic feedback loop between brain, biology, culture, and environment to evolve new symbolic organs, telepathies, and telekinetics aligned to language and number skills, both within individuals and across generations. Due to accelerated capitalism, there is now increased competition for invention-power. [40] Lazzarato shows that contemporary capitalism automatically and constantly seeks out new creative invention-powers through telekinetic 'collaboration of brains.'

[36] Stanislas Dehaene, "Evolution of Human Cortical Circuits for Reading and Arithmetic: The 'Neuronal Recycling' Hypothesis," online paper, pre-publication version, published from Monkey Brain to Human Brain, ed. Stanislas Dehaene et al. (Cambridge, Massachusetts: MIT Press, 2004) <http://peterdanpsychology.ro/ro/pagina/25/files/docs/DehaeneFfysenChapterPre-emption2004b.pdf> (accessed August 3, 2013). Gratefully sent to me by Warren Neidich with other texts on material engagement of extended cognition.

[37] Maurizio Lazzarato, "The Concepts of Life and the Living in the Societies of Control," in Deleuze and the Social, eds. Martin Fuglsang and Bent Meier Sørensen (Edinburgh: Edinburgh University Press, 2006), 180. See also Warren Neidich, "From Noopower to Neuropower: How Mind Becomes Matter," in *Cognitive Architecture: From Biopolitics to Noopolitics: Architecture & Mind in the Age of Communication and Information*, eds. Deborah Hauptman and Warren Neidich (Rotterdam: Delft School of Design Series on Architecture and Urbanism, 2010), 539-81.

[38] Lisa Blackman, *Immaterial Bodies: Affect, Embodiment, Mediation* (London: Sage, 2012).

[39] Warren Neidich, "Telepathy, The Next Frontier."

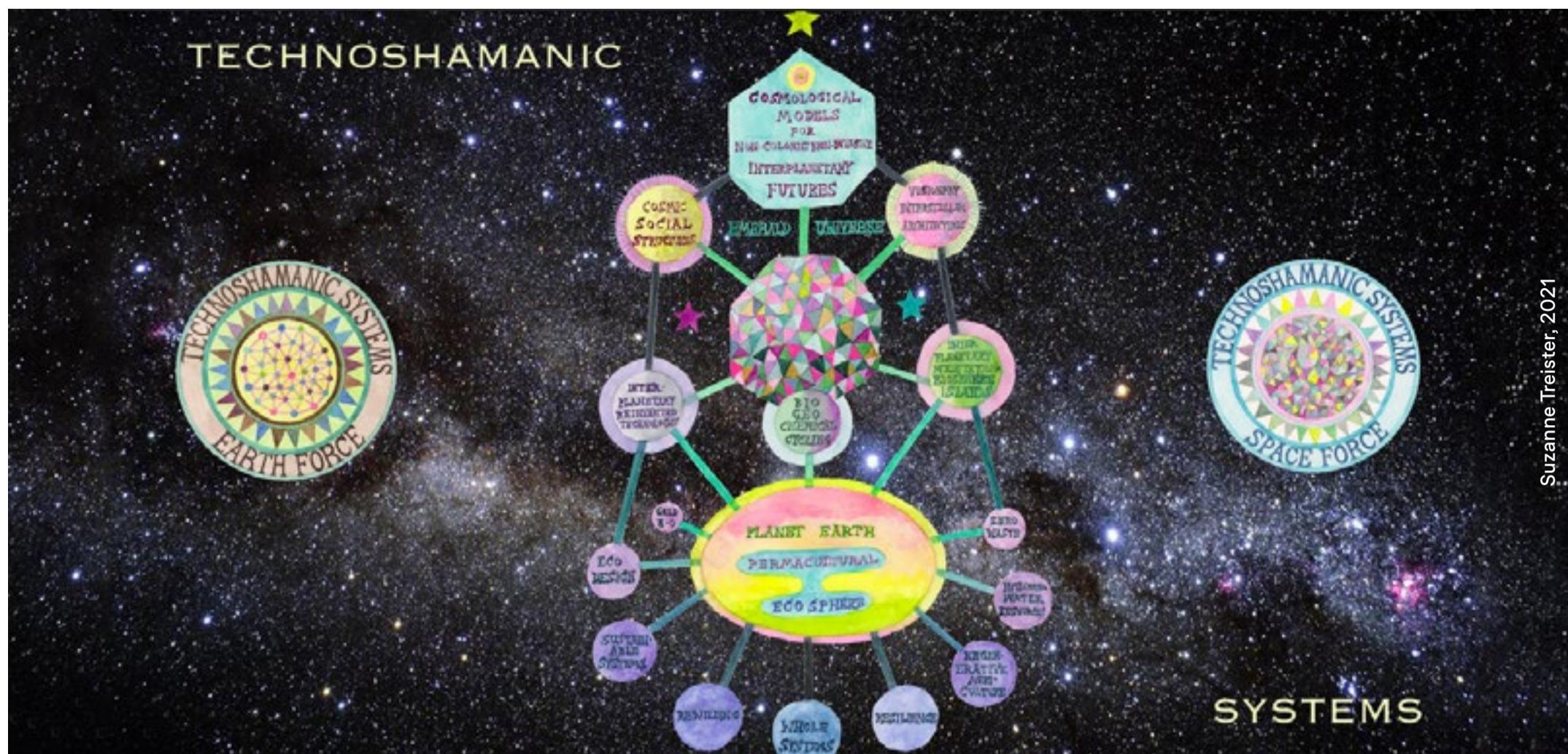
[40] Nigel Thrift, *Introduction to Cognitive Capitalism*, by Yann Moulier Boutang, translated by Ed Emery (Cambridge: Polity Press, 2011), viii.

[41] Sven-Olov Wallenstein, "Noopolitics, Life and Architecture," in *Cognitive Architecture: From Biopolitics to Noopolitics: Architecture & Mind in the Age of Communication and Information*, eds. Deborah Hauptman and Warren Neidich, 47-60 (Rotterdam: Delft School of Design Series on Architecture and Urbanism), 54.

[42] Tiziana Terranova, "Another Life: Social Cooperation and A-organic," *Digitalith 12* (2010), <http://digithum.uoc.edu/ojs/index.php/digithum/article/view/n12-terranova12-terranova-eng>. (accessed July 11, 2013).

[43] Ibid.

This is an excerpt from "All that is Solid: speculative, quantum and cognitive aesthetics of telepathy and telekinesis," in special edition *New Cloud and Molecular Aesthetics*, edited by Lanfranco Aceti, by Jacqueline Drinkall (Leonardo Electronic Almanac (LEA), MIT Press: 2017).



"Loving the alien" a Post-Posthuman Manifesto.

by Lisa Blackman

One of the key anxieties driving the human within the context of non-human agencies and actors in the present is the question of the survival of the human. However, the kind of human at the forefront of such survival strategies is one understood through the fiction of the autonomous selfhood; ie., one that posits the human as a bounded, agential centre of experience attempting to plan for a future by maximizing all the tools at its disposal, including different forms of futurology aided by non-human actors and agencies. This is about the extension of the human into the future, rather than its radical displacement or decentering and enacts a familiar fantasy of control and omnipotence. It meets and revives another fantasy of human survival that has a long genealogy and that can be found across many religions. This fantasy probes the survival of the human beyond death, beyond corporeality, and beyond personality in a non-corporeal or immaterial form.

Frederick Myers (1903), for example, who coined the term telepathy in the 19th century also wrote two volumes of a book called "Human Personality and its Survival of Bodily Death", where he argued that all manner of psychic entities and phenomena, including telepathy, clairvoyance, automatic writing and so forth, were evidence of human personality existing beyond death. Myers was an odd fellow but one who always remained noncommittal about whether telepathy, for example, as a mode of communication actually existed. This more positivist question was deferred to one, which was more speculative or what the historian of science, Ian Hacking (1988) has termed non-theoretical. I have likened this conjuncture found within early psychic research to a form of experimentation, which explored what it might mean to experiment with the extraordinary and improbable. It was shaped through a more performative or counterfactual experimental assemblage that might form the basis for a speculative science and more innovative propositions (Stengers).

As many media archaeologists have argued, this more speculative science was part of a broader cultural imaginary, which took the possibility of psy-

chic phenomena (extra-sensory perception) into the shaping and formation of early media technologies and practices, showing the reciprocal and interdependent relationships constructed between 19th century psychic research and the development of modern media technologies, such as TV, radio, cinema, telegraphy and the printing press. In this sense communicating with the dead, the alien, the unseen, invisible and immaterial was part of a potent cultural imaginary which showed the permeable boundaries between philosophy, science, media, and culture in the realization of what came to be.

Many of the key process philosophers who have become so important for contemporary theorising (affect, new materialism, speculative philosophies) were also part of this imaginary; this includes Henri Bergson, William James, Gabriel Tarde and Boris Sidis, as I argue in my book, *Immaterial Bodies: Affect, Embodiment, Mediation* (2012). Although there was something distinct or unique about human personality that could endure after death, psychological processes and practices were also those which extended the human into a web of relational connections with human and non-human actors and agents which blurred the boundaries between the material and the immaterial, the human and the technical, the dead and alive and the human and the non-human. This was a distinct psychic imaginary, which approached psychological processes as more indeterminate, contingent and distributed and provided a discontinuity with what was later to take form within psychology as the 'fiction of autonomous selfhood'¹³. Important for my argument is to consider what happened to psychic research and the imaginaries that it shaped as psychology professionalised throughout the 20th century. As many have argued, following the writings of Michel Foucault, psychology was to become a key science of population management, rather than the science of the individual it proclaimed to be. It was to provide some of the key techniques, concepts, strategies and understandings that shaped a variety of practices of self and social regulation. It is within this context that psychic research was expunged, excised and even exorcised from psychology, migrating into a form of "weird science" that has to be continually policed by sceptics in order to disavow, disallow and disqualify those anomalies, puzzles and contradictions that might threaten or disrupt its normative ideal or image. In this sense science is always hauntological, where science is haunted by both the histories and excesses of its' own storytelling. I argue that these excesses surface in "queer aggregations" or haunted data to be mined, poached, and put to work in newly

emergent contexts and settings. This argument might form the basis for a speculative science, which could open to new forms of humanness that allow for the emergence of a non-body politics founded upon the decentring of the human from its privileged throne. This is also a speculative science, which recognises the role of artists, philosophers and humanities scholars in shaping sciences, which are more open, creative and adventurous.

This is an excerpt from "Loving the alien" a Post-Posthuman Manifesto, 2016 by Lisa Blackman, https://research.gold.ac.uk/id/eprint/21680/1/Blackman_Lisa_Loving_the_Alien_2016.pdf, p16-19

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