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Biomedia and anthropology of gestures and body

In the era of biotechnological media and communication at the molecular level, Flusser's theses devoted to the design of oneself, gestures and their new anthropology are extremely intriguing. In this essay, I would like to see how the intuitions of the Czech philosopher created in the era of traditional electronic media dominance are compatible with contemporary forms and situations that the author himself did not live to see.

I will start by invoking two Flusser's theses. The first relates to the liquidity of life in post-modernity and the possibility of constructing its microshapes. Vilém Flusser says convincingly that *we are projects for the construction of ourselves and of alternative worlds* (Flusser 1989: 4). We are finding new tools for this purpose to be able to design social and cultural events and processes. This is how the media – devices, their administrators, their programs and the accompanying narratives arise and penetrate into social life. Their role for the shape of culture is fundamental: just as language – according to Flusser – can be understood as reality, so the media should be considered the most important design tools that we use more or less consciously and / or successfully. I would like to combine this hypothesis of a designed world with another thought of Flusser's, in which he points to the essential role of gesture and the need for its new anthropology. He puts gestures in the very center of the communicative world. He understands them as the basic acts of action and communication. In spite of their importance, however, he still notices that we cannot properly understand and appreciate them. They have not been properly understood by science, which tries to explain them in terms of its established disciplines: biology, physics or chemistry. They do not fit in with classic humanistic disciplines and theories that try to "read" them first of all, that is, to decode them as symbolic events, acts of representation. For Flusser, gestures are a kind of cultural-biological hybrid that, molecularly – and therefore inseparably and irreducibly – connects the bodies and their organic dynamics with the will and intention of the person using them, is its primary expression (Flusser 2014: 153-306).

The first thesis concerns the media. For Flusser, tools play a key role in all communication activities. The media are a condition for communication, introducing noise, constraints, and opacity. What matters is the possibility of dialogue (Wiatr 2018: 177). The second thesis concerns the consequences of living with the media. Flusser is convinced that mediated post-modernity has distracted us from being in the world, that we no longer live on the basis of primitive instincts, in

a cognitive and reflection free coupling with phenomena and natural states. The meaning of both these thoughts of Flusser's can be reduced to the assertion that culture as such would not exist and would not last without media. They make us dependent on their mediation. We do not exist without media, but we have serious problems with the media. Abandoning natural directness, we became entangled in various mediation rules and media programs. Over time, we have established abstract thinking based on language and writing, understanding and discursive communication, distanced, telematic and alphanumeric forms of participation. Hence, our thoughts and ideas have split off from actions, matter and substance, and we have emancipated ourselves more or less consciously from the world of nature by designing ourselves and the culture through medial apparatus. Flusser says that *we, the true heirs to the ancient Jews and Greeks, do not permit any spiritualization of matter or any materialization of spirit* (Flusser 2015: 11). The emancipated and distanced view of man on the world and himself, including his own body, enabled the emergence of science and technology in their modern shape. Along with technical and industrial revolutions, we have become elements of the cultural project that we created. It turned out that this project contained us; it absorbed our bodies and colonized the organic conditions of our existence. In this way, culture (and its proper anthropology) was created, in which a man split up with himself, divided himself into a body and a subject distanced from himself and the world, his actions and feelings.

Digital media / objects / processes

In the course of this redesigning of ourselves, digital media and networks appeared in post-modern culture. The structure of these media necessarily reflect these processes of stratification and emancipation. The unprecedented shape of culture immersed in digital media ecosytems and networks depends on the hardware framework that physically supports and powers such systems (hardware), the division into calculation processes (software), and mathematical abstraction, which is radical in relation to earlier media programs and apparatus. These systems represent the most perfect media incarnations of utopian scenarios in the spirit of Cartesian duality, which nourish themselves with dreams of controlling the world by designing it. This cultural construct is driven by the belief in the possibility of machine and symbolic processing of everything that can be reduced to the form of mathematical representation. Reality can be interpreted and designed mathematically using a universal machine.

In the digital-network system, the difference between what is real and what is simulated / encoded, material and virtual, online and offline disappears. Objects, organisms, entities and events become models and objects that are subject to calculation processes. Digital media situations have

a triple nature: they have (1) a physical dimension; they are signs and machines transporting them; they are (2) logical formats, which means that they are data that these machines recognize, interpret and process; they are also (3) concepts, that is, they have the nature of semiotic, axiological beings: they are texts of culture (Kirschenbaum 2008: 3). There's a reason why at the dawn of the dominance of digital culture, Jean Baudrillard wrote about a reality that does not exist (Baudrillard 1995) – it is obscured by its media models and their implosive dance in search of carriers and receivers.

The main feature of digital objects is their processuality, that is their formal openness and susceptibility to computational processing. Processuality distributes such objects among various networked devices and programs, and in this way further blurs their graspable, form. They become less and less visible, are in motion and undergo the processes that shape them – hidden from a human perception and imagination that is accustomed to ordinary, analog and material forms of objects (Hansen 2006; Hayles 2005: 274). Digital objects manifest themselves only in temporary versions, in response to useful calls and queries of algorithms and databases. They live their lives, which only intermittently intersect with our access to them.

In digital circumstances, linear perception grounded in writing and printing interacts with the digital environment, traditional material forms compete with virtual representations and models, and finite, closed shapes and forms compete with continuous processing and remixing. We need to redesign cognitive schemes and modes of action that do not fit into this object-process environment. This is a situation in which it is time to return to the two theses of Flusser mentioned above: his thought on the nature of the media and his call for a new anthropology of gestures would correspond to the possibilities of acting in response to digital evolutions.

Towards anthropology of gesture

Gestures and media define Flusser's new anthropology. He wanted this anthropology to be immersed in corporality and its scientific approaches, and, at the same time, to be a kind of new theory related to the living body, an attempt to holistically characterize its presence and activity in the world. He wrote: "*To understand a gesture […] its "meaning" must be discovered. [...] we are dealing with a symbolic movement* (Flusser 2014: 198-203). To understand gestures in this way, their new theory has to be "*interdisciplinary, anti-academic and anti-ideological"* (Flusser 2014: 2853-2854). It has to contain number of perspectives and disciplines (communication theory, anthropology, cultural studies, physiology, kinesics, and economics).

Such an anthropological renaissance of gesture and body accomodates the tectonic

movements noticeable in the culture and humanities of the 20th century, resonating with new ways of recognizing and understanding the body. On the one hand, after years of Cartesian dualism, phenomenology came to the fore in the 20th century, advocating a holistic understanding of the subject, focusing on the possibilities of knowing the world and being mediated in it by the body. Such ideas were expressed in, for example, in Merleau-Ponty's book entitled *Phenomenology of perception* (Merleau-Ponty 2002) or Husserl's works, from which Flusser drew abundantly. In the humanities of the second half of the 20th century, similar voices were heard that criticized the distanced perspective of science and symbolic, mediated participation in the world. In his vocal criticism of the hegemonic role of scientific abstract thinking, the philosopher and methodologist Paul Feyerabend addressed this problem: *Abstraction seems to be a negative procedure: real physical properties, colours (in the case of mechanics), temperature, friction, air resistance, planetary disturbances are omitted* (Feyerabend 1987: 201). The body also became the focal point of the media and communication philosophy in the view of Marshall McLuhan, the influential conservative proponent of technological determinism. Anticipating the digital and network revolution he – like Flusser – pointed to the body as the first and final point of reference for media and communication events. Both referred to the body as the condition of these practices, the irreducible shape of the subject conditioning our ability to communicate.

On the other hand, during the so-called digital revolution, critical humanism was more and more inclined towards post-Cartesian optics, in the spirit of which it proposed rejecting corporality as a point of reference, especially in the public sphere. In particular, radically feminists and suffragists, such as Donna Haraway in *A Cyborg Manifesto*, diagnosed corporality as a limitation on the possibilities of a humanity that could go beyond gender,biologicalism in general. Haraway questioned the limitation of the body stressed by phenomenologists in learning about the world and reacting to stimuli. She proposed the body ideologically (politically) as open to technological transformations, completions, repairs and extensions in search of the most perfect, the most open, free and progressive "I" (Haraway 2006: 117-158). This trend of thinking was close to the scientific paradigms articulated in the "cybernetic doctrine," where logical rationality and the ability to process encoded data based on mathematical rules, where what counted was the technological / formal efficiency of information flows within closed technological systems.

At the turn of the 20th and 21st century, Media culture fueled and strengthened these doubts. Here we have a transition from the time of analogue media to digital and network media. The former were based on the logic of the mass dissemination of symbolic representations of the world: directed images, composed sounds and arranged texts for cultivating a politically "right" representation of reality. The digital and network breakthrough showed, however, that in addition to passive consumption of politically prepared representations, managed by the elite, it is possible

for a mass audience to use the media. In the digital media, many designers, users and interpreters saw the possibility of writing, not just reading, speaking on the occasions when listening was expected, designing images and environments in response to those already present. Consumption, reception, and perception have been balanced by the possibility of communication, real interaction in different variants and with different reach and efficiency through digitalisation and networking. These are the categories for which the common point of reference can be and increasingly appears to be the gesture: clicking, entering data, interacting by means of image transmission, games, software events, data management and their flow in the network. Flusser followed the process leading to the emergence of networks, the improvement and dissemination of universal machines. He reacted to these evolutions by asking for an anthropological correction. Intuitions led him to reinstate the body and the subject in the discourse, substantial and symbolic, understanding biology as information, perceiving the world with the help of media machines and transmissions, and actively interacting with their help.

Probably the fact that Flusser led a nomadic life influenced his ideas. Fate pushed him from place to place, from country to country, from language to language, from role to role. He lived in parallel with the implementation and spread of cybernetic media and network projects. Regardless of motivation and experience in his anthropology of gestures, in its connections with communication and media, Flusser essentially predicted and inspired discursive shifts in the diagnosis of communicative subjectivity. His ideas also coincide with today's trends in the development of media interfaces and interactive environments, as their users become more and more tired of the distance between what is virtual and what is real. The gestures set in the center of the communication universe constitute a link between the molecular and thus raw, natural constitution of entities and their awareness of themselves and the possibilities of expression and action to which they are able to incorporate organic matter. Gestures set the primary shapes of all events in which an entity participates and on which he has a greater or lesser impact. Life functions, perception, movement, action, self-expression – these are the foundations of cultural presence, underpinning the ability of a person to affect others beyond his biochemical cubature, to expand potential in relation to the outside world and others.

Biomedia

The contemporary media space for which gestures and body are of key importance are the biomedia and bio-techno-cultural ecosystem in which we operate. This is an area that was constituted in the time of Flusser. In the 1970s and 1980s, work on genome mapping was advanced,

GMO technologies appeared, advanced chemical and biological weapons, robotics and cyborg technology and implantology were developed. Today, biotechnologies for informing organic matter with technological systems are one of the most significant fields of technology and media evolution. They are in a mesh of culture and nature, in which organic forms and rules of life, that is, "information" and instructions are encoded in genomes and ways of functioning of organisms and organs with cultural codes of technology. Their programs and apparatus meet and react with each other. They attach themselves to the body and mediate with it according to their own programs – such as ECG stimulators, artificial eye cameras, auditory implants, and neuronal interfaces. At the same time, they also attach bodies and structures that are alive into machine systems and technocultural circuits created by them. Data circulates between databases, protocols and software. In this way, biomedia become an important point of reference for such cultural forms as communication, technologies or politics (Thacker 2010: 117-130).

A more general diagnosis of biomediation and its cultural and technological conditions can be found in Bernard Stiegler's philosophical anthropology of technics. In his opinion, anthropogenesis implies technogenesis, which means that the history of media technologies can be interpreted as improving technical forms that mimic nature and constitute prostheses defining the shape of life in the world. Stiegler writes: *For to make use of his hands, no longer to have paws, is to manipulate – and what hands manipulate are tools and instruments. The hand is the hand only insofar as it allows access to art, to artifice, and to tekhné. The foot is these two feet of the human, this walking and this approach only insofar as, carrying the body's weight it frees the hand for its destiny as hand, for the manipulative possibility, as well as for a new relation between hand and face, a relation which will be that of speech and gesture* ... (Stiegler 1998: 113). Both processes run in parallel, and as a result man and technics are inextricably linked. Man invents technics, and technics creates man. Hence, the biological aspect of this looping and the importance of the organic sphere for the shape of communication cannot be overlooked. Biomediation understood so broadly is one of the natural states of culture, and the relationship between biology and culture can be compared to the hybrid: hardware (biology) and software (culture), for which man is a model, natural interface and operating system (Flusser 2013: 65-72, 89-96).

The media that touch the organic matter of entities and stick to their life "systems" by interacting with them directly, circumvent the possibilities / limitations of the natural sensorium and the properties of the body organs. They are a kind of bypass, the task of which is to relieve data flow channels, electrical impulses stimulating the nervous system and receptors, chemical substances or waves between the outside world and the subject / organism. When such biotechnological channels begin to function, the body ceases to be obedient only to the subject and fully integrated with it. It is opened and subjected to external influence, which the subject cannot

manage and which he may not be aware of.

The rules of biotechnological communication have a wide range. They are of interest to politics which sees the future of power and social control in direct control of perception, neural reactions and vital functions of citizens. Over the past years, with verve comparable to that which accompanied the mapping and decoding of the genome, there are military, economic and political projects aimed at creating an accurate map of the human brain and the accompanying indices. The market has a similar appetite for their use. It treats the possibility of entering the skin and the brain as an excellent tool for stimulating subjects and managing their instincts.

However, biotechnological communication is also the subject of critical reflection and care on the part of media art and digital culture today. Artists such as Stelarc have been exploring the possibilities of playing with technologies of the the body for many years, proving how little specialized knowledge is required, and how simple the tools needed to control the body from outside actually are. A few years ago, the ZKM in Karlsruhe, under the leadership of Peter Weibel, carried out a scientific and artistic project called Molecular Aesthetics (Molecular Aesthetics 2013). The exhibition and the book accompanying it were one of the attempts to transfer the subject of molecular aesthetics to the art of media and digital culture: the semiotic analysis of the phenomena of life, the aestheticization of these phenomena, and the building of humanistic discourses devoted to living matter.

Stelark and Weibel, respectively an artist and a narrator of the media culture – who are just some examples – consciously follow the trail of Flusser's concern for a proper understanding of gesture, body and subjectivity in their projects. They also make demands for a new anthropology based on a gesture – a reunion and creative unification of science, art and nature around a holistic organism. In this way they address scenarios of biotechnological colonization and control of bodies. Their experiments and inquiries give us a taste of the dispute that is just starting up in our mediated culture. The front lines will be set between forces ready for political and economic colonization of organic matter, penetration of activities of the subjects and their control at the molecular and cognitive level, and neohumanistic defenders of biological inviolability and irreducibility of entities.

Gesture design

It is time to return to Flusser's thought on designing and the need for a holistic understanding of gestures and their new anthropology. Penetrating corporality, molecular structures or gestures refer to the most basic, substantial dimensions of our existence. By communicating with the body and

its molecules, biomedia can program bodies' shapes, rules and dynamics of action. With biomedia ready to initiate the work of muscles, interfere with the electrical characteristics of the nervous system, upload thoughts and arouse emotional states, we cannot be sure of the autonomy of any of our own actions, thoughts or emotions.

In the biomedia system, we are less and less resistant to ways of opening the body to connections and communications that bypass sensorium and its relatively familiar, distanced perception. With the development of cyborg ideas and formats, technologically enhanced organisms, artificial intelligence and robotics, our bodies become open projects. Managing their shape ceases to be unambiguous. Not only the entity itself, but a range of programs, interfaces, data streams and stimulators inserted in various networks and communication channels participate in the structure of information and management of the organic substance. In this way bodies or the organisms become alphanumerically managed databases. They become technical images emerging as open projects.

A gesture is a movement of the body or of a tool connected to the body […] – says Flusser (Flusser 2014: 170-171). Biomedial redefinition of the body and gesture raises a question about a definition of gesture that would make tools and media a condition of gesture. I think it is a current and future state that demands a proper understanding of gestures and the meta-disciplinary anthropology devoted to them. They must be based on the parameter of interactive reciprocity and interchangeability: first we taught the media to respond to our gestures, we made them tactile, interactive and responsive. Designing them in this way, we have facilitated feedback, we gave them access to designers' organisms and let them talk to us, massage our molecules and stimulate our nerve circuits. By making gestures towards the media, we have opened materially to the gestures that the media make to us.

Biomedial tools have the capacity to read our bodies and their actions. That was the case with the Japanese dancer Kaiji Moriyama who connected his body with an original interface and AI system, which could translate human movements into musical expression. By moving, Moriyama could control the piano and, at the same time, perform the dance during the concert entitled "Mai Hi Ten Yu", which was held in Tokyo on November 22, 2017 (www.yamaha.com/en/news_release/2018/18013101/). That is how biomedia are able to communicate our gestures and design the world around us. Yet Stelarc and many of his followers proved, with experiments connecting bodies to variety of technological extensions, that those powers are able to take conscious control and reshape our molecular dynamics and movements. Media are making their gestures to us with or without our consent.

Here, gestures are an open design task. The task is open, because their shape and the organic situation can be defined by various entities using biomedial connections at the molecular level. This

is a design task, because in the situation of expanding the body's possibilities with the use of tools connected to it, it is impossible to indicate the physical limits of such gestures – they can be designed in various functional systems, give them different shapes.

Towards the media anthropology of gestures

However, in the anthropology of gestures one should also take into account the state of tiredness with the media and their discourses – the will of non-meditative, authentic, unique action. French dancer Nadia Vadori–Gauthier dances to express her attitude towards the political situation in France. She states: *On January 7, 2015, the evening of the Charlie Hebdo attack, I was deeply shaken. That evening, I established the project Une minute de danse par jour (One Minute of Dance a Day), to act as a sensitive presence in the world. I wanted to give myself a daily activity, small but genuine and repeated, working towards a poetics of action, of personal commitment, alone or in relation to others.* By the gesture of free dance she wants to *propose alternatives to the dominant regime of representation* – it is to express and communicate on the basic level with gestures of dancing bypassing media environment and their strong, overwhelming influence (www.uneminutededanseparjour.com/en/the-project/). That level of basic communication is getting more and more popular with the rise of phenomena such as new circus movement, experimental theater, gaming, parkour.

On the one hand, we have gestures stimulated and modeled by the media, inserted into network data circuits and mediated by sophisticated biotechnology interfaces. On the other hand, the excess of media stimuli and the disappearing sense of intimacy and subjectivity generate our need for cultural ecology taking the form of acts and activities beyond the media flow, going beyond literacy and its modern media shapes and discourses. This state of affairs creates a field for media anthropology of gestures – Flusser's diagnoses and postulates are even more important today than at the time of their publication (Flusser 1991).

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