Behaving, Mattering, and Habits Called Aesthetics

Part 2: Theoretical Cays of Phenomenologically Making-Sense

Introduction

Four cays are presented. The first is titled "behavior matters." It consists of a composition of ideas from a discipline of behaviorism that relate with how behavior is material and how its meaning is actively practiced. Methodological behaviorism views its object of study as external, mechanistic, and separated from an esprit, which can be understood as a characteristic (ethos) or style of habitually be-having and growing exosomatically. Through habits, behaviors have their own material agency and forces of self-replication or selection. The second cay is titled "Oh Behave! The doings of habit or making bodies of art," which is an account of the problem of sensibility and feeling (aesthetics) in relation to behavior. Phenomenological aspects of habitual retention are raised. This situates behavior as a phenomenon that does not exist, but rather consists with exorganogenesis, which is the production of artificial objects that resist utility or reductions to fixed employment. So, all art is an axiomatic product of behavior. The next cay is named "On the Material Habits Constitutive of Music, Caripulation, and Memory." For clarification, the term, to caripulate, I generally use to describe a practiced movement conjoining the Latin *carus* or the wish and desire that is first needed for

^{*} Jagiellonian University in Kraków Email: adrian@doctoral.uj.edu.pl

any movement whatsoever, and the carō or the body as flesh, as in manipulation—which is a handful—or pedipulation, especially when talking about the feet or pedesis, which is a theory of motion "directly and iteratively related to its immediate past but is not determined by it" (Gamble, Hanan, Nail 2019, 125). Here musical behavior is thought of as a kind of savoir-vivre that grows (habituates) bodies and their capabilities for moving. The goalings and bodily gestures are conceptualized by what I call caripulations that store the "objective" memory of behavior that has passed and that anticipates its next step and repetition through the growth of flesh and production of new instruments. It is an organologically practiced movement of making symbols orientated by desire, generative of savoir-faire. Three distinctions of behavior that leave marks and make selections (caripulations) are presented in accordance with the premises of the phenomenological general organology, which include: its primary retentions as present behavior that is passing, its secondary retention as memory inscribed in the growth of flesh, and its tertiary retention as artificial technical supports that shape and are shaped by behavior. Finally, because of the possibility of manipulating tertiary retentions, which condition the selections of primary and secondary retentions and protention, a pharmacological motive is proposed for the further caripulative priming of behavioral drives (associated memories). The pharmacology of behavior includes its sensed patterns that are composed organologically, contextually both toxic and therapeutic. Behavior is artificial or technical, it is a techne, which has been overlooked by philosophy because of its assumed naturalness.

Behavior matters

New materialist thinking provides understanding that adds to the philosophical investigations of behavior that matters. The new materialist problematics of behavior would include its meaning and how it is material. I would like to explore the situation when we say a certain behavior matters in this section, since what we usually mean by that phrase is that behavior is important or significant. In effect, it makes-sense. In the arts and crafts, all behavior matters since etiquette and performance guidelines regulate them. To mis-behave would be to break norms and bring about scandal. It would also imply breaking expectations or exhibiting new forces and agencies. Of course, the arts also involve this kind of breaking of expectations and established habits. Then again, to say behavior matters would also be to say

that a doing of matter is to behave, meaning that certain behaviors are activated by stone tools (cutting), watercolors (painting), and other media (acting, performing, being a medium).

The terms that we use every day to denote changes of states such as action or reaction are also equivocal and quite ambiguous, which is significant if we consider that they are used to describe a massive extent of reality, from physical changes in matter and its properties to psycho-physical stages of change that are correlated with behavior change. Rather than thinking of matter as mechanistic, and with it the flesh and embodied behavior in general as just mere Cartesian mechanisms, the vitality of matter, its performative dynamics (Tillman 2015), constitutes the general focal point in the recognition of habit as it relates to performative materiality and practiced human life. In the framework of agential realism, matter is not "passive" (Tillman, 2015, 30). This signifies a confutation to the idea that the behavior of matter is permanent and fixed. In simplification, behavior is what comes after an intra-active cut. Instead, as Diana Coole describes, intra-active matter "[...] is self-transformative and already saturated with the agentic capacities and existential significance that are typically located in a separate, ideal, and subjective realm [...]" (2010). If, for a moment, we shift our attention to the psychological behaviorism (Graham, 2019) of Ivan Paylov where organic responses to external physical stimuli have been coupled with different stimuli, called classical conditioning, we see that the assumptions of the old schools of behaviorism fit snuggly into the mechanistic paradigm of physics, where all behavior change supposedly originates from "external" actions that manipulate fixed "internal" mechanisms, which is to fail to understand any exosomatic organicity.

These organological changes of states, as a mechanistic readiness to respond to stimuli, also reveal the idea that matter is "separable." Here the methodological behaviorist schools (Graham 2019) come to mind, where there is a privileging of observable external behavior as explanatory for an organism's behavior. In such a case, the assumption that a mysterious extramaterial force called a "mind"—in other words the premise that matter holds no faculty for reflection or thought, as unmeasurable or inaccessible—is ubiquitous yet concealed. Changes of mental states (forces of granting meaning), thus, would be material changes omitted by methodological behaviorism. Moreover, the stimuli—as isolatable—are conceived as distinct from the agent they are acting upon, or even the human scientist is separate from the subjects they manipulate. Maurice Merleau-Ponty, who criticizes the mechanistic sciences with the aid of pathology, shows in *The Structure of*

Behavior that mechanicalistic cause-and-effect chains are not necessarily appropriate because of the *phenomena* of *wholes* (Merleau-Ponty 1963). Because of this phenomena, the structure of behavior is endowed with meaning, it makes-sense, and is more than a sum of its parts or mechanistic, linear chains of causal reflexes and reactions of the material flesh to isolated physical stimuli. This means that behavior is neither random nor probabilistic. It is not necessarily mechanistic and has a procedural bearing. Its pedetic¹ unpredictability lays in the mutual intra-active influence of matter with itself due to relational material arrangements and changes (Gamble, Hanan, and Nail 2019, 125-127).

A re-affirmation of the ontological significance of materiality draws with it the consequences of diffracting behavior itself. Matter cannot be separated from the *esprit* or mind/spirit (as external forces of meaning-making), and it cannot be isolated from other matter. So, matter behaves, and specific behaviors materialize. There is a dynamic relation between consciousness and behavior, including a plethora of other forces such as will and intent, the *nous* or intellect, and the collective or social, which all significantly intraact with matter that has its proper agency as "an ability to cause some kind of change" (Tillman, 2015, 32). Through habits, behaviors have their own agency and forces of self-replication or selection. This brings us to aesthetics, the philosophy of sensing or making cuts, a substantial consequence, reconnecting it with ethics, the political, and bringing new understanding to the technical, to *techne*. Stiegler goes so far as to claim that techne had been disadvantaged and isolated by Platonic and Heideggerian philosophy in favor of *episteme* (Stiegler 1998a, 1; see also Parry 2020).

Oh Behave! The doings of habit or making bodies of art

In this section I explore the existential implications of the perceived phenomenon of "be-having" that becomes constitutive of states and disposition, of habits. In 2019 I posed the question of what generally is understood as art (techne) *does* in place of asking for a substantial definition of what art *is* (Mróz 2019b). Growing from my previous deliberations, I do not intend to stabilize the ontological, or metaphysical, understanding of art (craftwork, applied arts, fine arts, entertainment, etc.) and fix its workings in terms of a static definition. Such a fixation is usually contested by the avant-garde

 $^{^{\}mbox{\scriptsize 1}}$ "Motion of semi-autonomous self-transport" like the movement of the foot when walking.

practices of artists and art workers who may refuse to be locked-in by formal prescriptive barriers, which are practices of employment rather than *works* or *workings*.

What is lacking here is the problem of *aísthēsis* [α (α 0 θ) α (α 1) in relation to behavior. Analyses that do touch upon the subject of behavior usually stop at banal conclusions that art challenges habits and fixed mechanistic behaviors, which certainly is deceptive, and which ignores the ongoing iterative and performative processes of habits (*hexis*), which materialize. Art (techne) generally understood is a working of habits and a fixing of aesthetically (sensory, feeling) orientated behavior that is not a mechanistic fixation. But to know what we are talking about, we must realize that behavior itself is not fixed, as an experienced object of reflection or diffraction, it is matter's way of moving in constant flux. Phenomenologically, subjectively experienced behavior is not the same behavior that we remember (retain), for the same exact behavior can be equivocal, since it is a temporal object of the embodied material consciousness just as much as a melody is, and there are protentions or anticipations manifest in behavior, such as in the bodily movements of a predator prepared to catch a prey, which is the memory and anticipation of devouring.

If we take an understanding of sensitivity as causal prefixed and determined reactions, which is to say that of the pair stimulus—reactions, then we fall into the trap of fixing the flesh into closed entropic reflex system models, where stable unchanging systems need to be thought of as in place. Merleau-Ponty, however, suggests the opposite (1963). Behavior emerges as an entangled act of commerce between an environment and the interdependent (which we can understand through metaphor as a dependence of the monads) and intra-dependent (which we can analogically understand as the state of being of holobionts) as well as the emergent (superorganisms like the ant hill which is capable of "remembering" as a collective as opposed to the individuals ants who do not share this memory) entities that arise from a plethora of environments and create new milieus at the same time. Behaviorists most certainly do not negate the mind, they only make the claim that they cannot measure the mind, which is to say that it is the infinite.

In an article for *Psychology Today* Tim Carey writes that behavior does not exist, and he is right insofar as we understand that neither does art, since they form a consistency that persists and insists itself, for he claims, with a cliché of contemporary consumer aesthetics and viewing mind as metaphysically distinct from matter, that behavior "only exists in the eye of the beholder" (Carey 2019, para. 17), which makes it a subjective problem

of relational aesthetic (sensory) inquiry. This is to say that behavior's materiality is at once a perceptual (techno-epistemic) and an organological (ontic) problem. Carey instead substitutes the equivocal term "behavior" with the term "goaling". This is because behavior, as he notes, is ill-defined and caught in a vicious loop. The term "goaling" is a verb that is synonymous with control processes (hexis), which consist in an attempt to control involuntary and voluntary actions or various approaches to reach specific goals (that is maintain *homeostasis*) of an organism. Even if such "innate" action is called "instinctive" or "reflexive", it is still dependent on learning and memory, or making-sense. One goal of any social organism would be that of "exclaiming" or expressing its Self via technical exteriorizations (growth of the body and its supplements) or exorganogenesis. That said, there are goals that one may be conscious of, and goals that are forgotten or that one is totally unaware of, and this should not be thought of as limited to the agency of an individual, but rather as the intertangled web of intra-actuated goalings, not reducible to instrumentality or utility, conducted by all inhabitants contributive to the processes of individuation. This idea leaves room for the fact that one and the same organism may have contradictory behaviors, which often are called pathological or dis-ordered. However, if viewed pharmacologically, then this contradiction becomes an accidental necessity in terms of the already passing present orientated towards a future becoming.

To reiterate, I do not have in mind the problem of habits as forms of fixed, mechanistic, never changing behaviors, because to do so would be to completely ignore the phenomenology of behavior itself. No organic behavior is ever an exact replication, no habit is ever fixed, and as a singular action that is sensed and unfolds in time, a specific attractive or repulsive behavior is itself a temporal object composed of retentions and protentions, of memory and anticipation, of trauma and anxiety, of nostalgia, nightmares and dreams, and of hopes and desirable or fanciful carnalities. Moreover, it is also programming idealized automatisms into organizing organic matter, which become craft and skills elevating their products in their time for care to the extra-ordinary status of art, as well as de-automatizations, which happen while learning and growing (habituating) a new body for new tasks that demand such a novel embodiment. All art (techne) is a product of behavior. And all aesthetic sensitivity is an effect of art's material fabrications and organological manufacturing. The final product, which is the artwork, is thus only a small part of a great scheme of doings,² one that steers behaviors and

² Katve-Kaisa Kontturi addresses many of these marginalized aspects such as stratification and destratification, co-working, or the autonomy of process in the great scheme of

grows perceptual patterns of "appreciation" or art consumption as well as its fabrication, production, logistics, and technical realities. These processes have been generally taken for granted, and thus made invisible.

On the Material Habits Constitutive of Music. Caripulation, and Memory

Hyper-industrial aesthetics consists in the programmed behavioral conditioning of responses and reactions like saying "wow!" "breathtaking!" or "beautiful!" (Mechner 2019) and in learning how to pay sensory attention, how to focus on the material sources of beauty, pleasure, reward, and so on. In turn, these tactics transform an environment (like advertisement as sensory pollution and exploitative devaluation of the embodied spirit/mind) and the collective and individual perception of and attention to stimuli which reside in the dynamic of conditioning one's body with peripheral artifacts so as to grow "an eye" or "an ear" (Stiegler 2011b) and so as to grow resistance or develop habitual desensitizations. The industrialization of making-sense enacts a cognitive modification of the ways humans process various sensory stimuli, such as works of art and entertainment, according to selections (memory). Such behavioral selections are habitually retained in materially inscribed social reality (Barrett 2018), traditions and institutions that care for artifacts and maintain emotional labor.

Certainly, artists, art workers, and the amateurs shape an aesthetic through various media at vastly various levels of complexity, from the applied arts of decoration and crafts to the massive performances that engage thousands. The musician must co-work with the material foundations of music. This working is a learning of habits, and a fundamental shaping of behavior as the labor that advances the work of art. A musician must carefully learn how to behave (savoir-vivre). They may change their diet to have strong nails for playing on the guitar, and then shape those nails following the demands of nylon strings. They will certainly re-shape their bodies through practice routines and training exercises. They grow new flesh and hard-wire automatisms and reflexes that are the foundations of music. Music is primarily a work of the body. It has always been a shaping of the ear through the shaping of the flesh and its perception systems and artificial objects that sculpt thinking it-self. Conversely, ever since the invention of the

the emergence of art and its doings in her book, Ways of Following: Art, Materiality, Collab-

oration (Kontturi 2018). I would like to thank Milla Tiainen for pointing this out.

gramophone, music has been separated from the practice of moving one's body with an artificial instrument to generate a sonic disturbance in the air. This movement, this organized behavior, has been re-organized: industrialized and passed-on to the machines, including computers. The work of producing music now involves the swipe of the finger or the touch of a button, which results in the sensory audible experience of listening to music, but no longer a rigorous act of being with one-self while producing sounds, of a critical listening to our body's ex-static and ex-cellent relaxation that had been needed in order to intra-act with its material instruments to produce any idealized form of sonorous flow. We hear music everywhere now, and its habitual significance and disciplining of corporeality have significantly transformed (Delalande 2020) since its industrialization.

The self-control needed to conduct music (practice routines and a musical savoir-vivre, learning skills such as how to read music, the search for improvisational savoir-faire and technical knowledge, the task of inventing the new as the knowledge of conceptualization, and so on) has resulted in the industrial division of the behaviors of music by inventing music experts, called musicians, who are tasked with the work of playing music for the benefit of music consumers, be they art critics or the mass markets audience. Listeners have in reality been musically proletarianized, since they have lost the artificial behavioral knowledges that are fundamental in the carnal needs of the body and the material demands of instruments, including production realities (musicians are very keen on technicalities like selecting the type of wood an instrument is made from, or on the fabrication process and instrumental maintenance itself). It is also a practice of learning how to grow a body, how to be with aesthetic dissonance, of enjoying a piece and at the same time being disturbed by it, since the *challenge* of playing has been one of challenging and ex-ceeding abilities and habitual skills, as well as the perceptions needed to appropriately move the body and to, finally, move others.

Abstracting from the above-mentioned *discipline* of music, we may generalize: all artwork is work that is a working of the artist by the material that the artist *caripulates*. I selected this term in place of manipulation, which has a negative connotation, with the intention to be as maximally inclusive of the entire body as possible without privileging the hands and their digits. To illustrate the former, the behavioral caripulation of material by artists which is also material that carnally sculpts the artist's being, we may consider learning how to knit, how to sculpt, how to tattoo, how to draw, how to paint, how to play an instrument, how to edit and upload content for social media like vlogs or capture and disseminate selfies, how to act or learn how

to play a role for theater, how to tell jokes or stories, how to learn new habits and forget (poor) habits that have been made while learning certain skills, or how to curate the artefacts installed in contemporary art museums and galleries. Of course, we could name other examples for consideration, but this would lead to an endless list. Nevertheless, such ability or *savoir-faire* is transformative and singular in each case. Material is a manipulation of physical matter (manually knitting a sweater) and in others it is abstract (such as in making conceptual art).

In order to become consciously aware of our own behavior, it must be submitted to a process of phenomenological objectification, to scrutiny and criticism by others, which is at the same time a factor of stimulation that changes the original behavior in such a way that leads to the materialization of the symbolic, as is the case with *savoir-vivre*. This quasi-externalization process is one that leaves traces and signs. If this were not the case, then tracking by hunters, including marketers, coaches, and psychics who have learned to read *body language*, would be an impossibility. In other words: "Humans have always left traces of our behavioral and cognitive processes." These traces have evolved with us: where our ancestors left stone tools and cave drawings, we now leave digital traces—social media posts, uploaded images, geotags, search histories, and video game activity logs" (Paxton & Griffiths 2017, 1630). Through the traces of behaviors, which are computational (Gomes et al. 2017, 8), we caripulate temporal sequences or time itself, which is the play of 1) the conduct of here-and-now taking place for a moment in the present, 2) the memories of behavior (as repetition or repetitive behaviors called habits and stored in the living flesh: the muscles, nervous system, and brain, and which can be forgotten, or go extinct, and also spontaneously recover), and 3) the recordings of behaviors, which are their material traces to which Paxton and Griffiths refer, such as the stone tool which is a memory of the action of cutting or the meta-data produced on digital media, which are memories materially externalized by organizing organic matter or the living body understood as the flesh, since algorithmic "alerts" may remind us to do some action (calendar or alarm clock) or act a certain way (such as open an app or respond to a text message).

I have formulated these three distinctions of behavior with the support of Bernard Stiegler's analysis in the series *Technics and Time*, especially volume three. There, he undertakes an analysis of retentions and protentions, and contributes the category of tertiary retentions to Husserl's phenomenology. Briefly, retentions refer to what consciousness retains, keeps, or apprehends. Primary retentions are the now moment, which in Husserl's compari-

son to the melody, would be analogical to a given note of a melody that happens to be playing at a certain point in time. Secondary retentions refer to repetition, to memory, to the imagination. After hearing a melody, it is possible to consciously replay it within the imagination. Now, tertiary retentions, are the supports of both primary and secondary retentions. I understand them as all marks and traces, techniques and technologies, all devices and equipment, from which consciousness and its memories as selections, that must include their protentions, come.

If applied to *behavior*, rather than consciousness, then how can retention be possible? It is necessary to note that behavior can be manipulated, or as I prefer to say—caripulated. This is evident through the success of classical conditioning and radical behaviorism—"far from being dead" (Brown & Gillard 2015, 24)—or the study of functional relations *with* environment events (Heward & Cooper 1992, 345), which is used still today to get dogs into scary MRI machines for studies. Behavior at a certain moment is easily comparable to primary retentions. What is not clear is the storage of memory in behavior. Memory as behavior is conceivable, since learning is something organizing organic matter and organizing inorganic matter *do* (Delaney & Austin 1998, 76), and ancient mnemotechniques of dances and songs (Kelly 2016) should suffice as evidence for the claim that secondary retention of behavior is an organized form of repetition that carries knowledge, actions learned either by heart or in parrot-fashion.

When it comes to tertiary retentions, the recorded trace, which is organized inorganic matter, then we have come to live in an age where an exact repetition of a behavior is possible for the very first time ever in human history. The photograph has given us exact visual replicates of poses, attitudes, stances, and general looks. With cinema, however, we can view one behavior repeatedly without any modification to its form. Moreover, this exactitude of behavior, especially in terms of algorithmic governability, is no longer something for the distanced gaze, of watching and re-watching various fantastic behaviors on the screen. Robotics provide dancers who move exactly coordinated with precisely the same movements in identical fashion at every performance. This is a novelty. Humans have been dancing the robot for decades. Nowadays, the task is to teach robots to dance the human, whose data are being collected, analyzed and whose actions are being algorithmically caripulated.

Pharmacological Considerations

Pharmacology is a philosophical term used by Stiegler and originally developed by Plato, Jacques Derrida, and later by Michael Rinella. It should not be confused with the very specific meaning referring to the medical or pharmaceutical industry producing chemical biologically active substances for bodily absorption, although I do indeed think also of this concept (the pharmakon understood as responsible for *cutting* or *striking*) in terms of "chemistry" or "magic," which I understand as a kind of aesthetic (feeling of beauty or style) that envelops desire or attraction, enthusiastic possession *qua* love or passion. When saying matter is active, I understand it as matter that can be the source of aesthetic reactions (like exclaiming "wow!") as well as bodily and social changes (e.g. in cognition or disciplines).

First, it should be noted that the distinction between organic compounds and inorganic ones remains only as a distinction and is not intended to draw sharp ontological boundaries. Nor is it an opposition, especially since this distinction is ambiguous and there is no agreed-upon definition in the life sciences, wherein organic is usually understood as a compound containing carbon-hydrogen bonds, whereas biological organisms do indeed contain inorganic compounds within their systems, which are essential for their survival (Betts et al. 2013, ch. 2.4). Moreover, if we take an exosomatic view (Stiegler 2018, 2) which is to question the Da³ of Da-sein (von Herrmann & Radloff 2011) that discloses human bodily life, then the relationship with inorganic organized materials which are artifacts, tools, instruments, and so on are co-constitutive of a relation that is just as essential to the growing patterns of the human being as water or oxygen under the dermatic boundaries of the flesh. For the stone tool requires digits that are capable of manipulation, and this implies that through behavior the environment has selected for the organ of the hand, and its supports in the shape of feet and an upright posture which has freed the mouth from grasping. This continuous process of transformation is still undergoing, as research in the cognitive sciences has shown there is an ongoing restructuration of the brain's functions due to the use of digital media (Hayles 2012).

³ The "Da" in *Dasein* means neither "here" nor "there," nor does it mean something present (*anwesend*) or extant: it is solely the designation for the phenomenon of "unclosedness," that is, for "openness." But what kind of openness? "The expression 'Da' means this abiding disclosedness (*Erschlossenheit*)" (GA 2/176-177). The "Da" of "Dasein" has the purely ontological significance of disclosedness, which is said to belong to Dasein abidingly (214).

Nonetheless, if we take a "pharmacological" research perspective, then all matter is active in some regard. For the philosophy of art this would or could include, for example, the material substrate of paints, which were toxic and hallucinatory, or the steel string of a guitar, which *cuts* into the skin of beginners and draws blood. There is no passivity or any distanced inactivity of matter, since there is much discussion (Bolt 2000) about the biological activity of molecules, and likewise, their psychoactive influences and effects, like social activities in the forms of rites and rituals or in terms of the use of power in suppressing certain biochemical becomings and privileging others within enormous, global, geo-political and economic superstructures of human ant-hills, where emergent *organizational* behavior is not a sum of its individual actors alone.

As we know, dug-up roots and herbs that require cunning in their caripulation can also interact with the flesh to discretely kill or cause harm. There has been a historical separation of a distrust with regards to drugs between the male and female, the right and left, between doctors and witches, the rational and irrational (Ehrenreich and English 2010; Whaley 2011; Faraone 2001; Hillman 2008). For the positive attributes have been associated with the privileged whereas the negative effects have been passed on to the scapegoat, the pharmakos, which have included women, foreigners, and the artisan *techne* itself (let's not forget that certain artists have been banished from Plato's *Republic*, and today they are still accused of "demoralizing" the Youth in moral panics), which is symptomatic of the containment and replication of repressive structures.

The action of *cutting* strikes at the root of the *pharmakon*, and as such, should be taken as a techne, which is also a cutting, for which the Slavic equivalent of techne would descend from the Proto-Balto-Slavic *téstei*, which

in Polish has become $ciosa\acute{c}$, a word that designates the work of carpenters, to hew, to give shape and form through the cut that is at the root of the labor (as a birth) of all assembly, which is constructive and destructive at the same time, and never in opposition, but a composition, a $diff\acute{e}rance$. The power of the $cios^4$ equips the arms since the arm can be extended and opened to shake someone's hand or shaped into a fist to strike them down.

Considering the above, the social cut is also present in what we may call discipline or conduct. There is a right behavior assigned to sitting at the table, to the *savoir-vivre* of consuming food, a privileging of the use of the right hand over the left, there is a proper way to appreciate art, and a correct version of scrutinizing goals. Behavior is the unthought arche of philosophy. which tries to deliberate this problem in terms of: φρόνησῖς–phronesis (wisdom of useful skills), $\tilde{\eta}\theta$ oc-ethos (ethics as habits), $\pi \rho \tilde{\alpha} \xi$ ic-praxis (doing), ποιέω-poiéō (making), of τρόπος-trópos (a manner), ὕβρις-hubris (overconfidence or pride), εύκοσμία-eukosmia (decency or good order), παροινία-paroinia (drunken conduct), or σκαιούργημα-skaiourghma (left handedness as ill-behavior, malice, cunning, treachery, or foolish action). Behavior as a *techne* was unthought since it was a natural movement of the cosmos, of order, and of orderly behavior. The ethos of music was to instill masculine and feminine behaviors into its practitioners, catharsis was to wash away any lingering acting-out and misbehaviors from the fabric of society since Ancient Greece. It was not until the 20th century did behavior become seen as an operant or re-active *medium* for scientific manipulation with the advent of behaviorism and for artists to cut, to shape, and to form in the form of the avant-garde. We can see this notably: in the works of Stephen Willats's Centre for Behavioral Art at Gallery House in London in the early seventies of the last century, that contributed to the development of conceptual art in terms of the creation of the practices of *performance*; and in the Cuban Cátedra Arte de Conducta of Tania Bruguera, who cut her behavioral art school's life short in rebellion against the Western practices of performance.

I adopt the artist Bruguera's view that the term "performance" is one that privileges contemporary anglo-centric Western culture and legitimizes established neocolonial market institutions of what Annie Le Brun calls "globalist realism," that is, a "shock" or disaster capitalism (Klein 2008) understood by me as a mutation of socialist realism of the Soviet Union (Le Brun

⁴ Polish: hit or blow, as in punch—the equivalent in French is *coup*, or the Ancient Greek κόλαφος, which is to strike with the fist, treat roughly, or to afflict and toss to and fro, which in Polish is $klu\acute{c}$ or $klo\acute{c}$.

2018). Contemporary art occupies both private and public environments, i.e. tangible, everyday social relationships, including the transformation of daily life and in particular its aesthetic framework, which is what Bernard Stiegler describes as an "aesthetic war" (Stiegler 2014a) that is waged through marketing and the Le Brunian art market. Given that the issue of "lifestyles," or everyday behavior, has always played an essential political and moral role in the eyes of activists and theorists alike, contemporary art, according to Le Brun, is now aimed at producing an effect of consternation or shock on as many people as possible. This, for her, is part of the ideological as well as emotional undertakings that are carried out on a massive scale. Le Brun writes: "Just as the Soviet regime aimed to shape sensibilities through socialist realist art, it seems that neo-liberalism has found its equivalent in a certain contemporary art (Koons, Hirst, Kapoor, Cattelan, etc.), whose energy is being used to establish the reign of what I would call globalist realism. The difference is that, in order to exert this global influence, there is no need to rely on representations edifying from a specific ideology. For it is no longer a question of imposing one conception of life over another, but essentially processes or devices [dispositifs] that are in perfect harmony with those of the financialization of the world. And if the terror of ideological totalitarianism is here replaced by the seductions of market totalitarianism. the specificity of globalist realism is to invite us to train ourselves" (Le Brun 2018, 36).

This would then be a self-training or auto-behaviorism almost reminiscent of machine learning, and a form of self-discipline that corresponds to what Stiegler calls symbolic misery, which is a reduction (and hence a loss) of subliminal motivation or desire (way of diverting energy) to desublimated impulsive drives designed and engineered by the market's use of behaviorism and psychoanalysis (Stiegler 2014; 2015). The stake of behavioral aesthetics is one of political and economic control over long-term processes of social and psychic individuation, that are not subordinated to short-term selection criteria of the financial market. Accordingly, I use the term behavior just as Bruguera had proposed within the methodology of the Cátedra Arte de Conducta in Havana. She claims: "The fact of being unable to pronounce the word performance well also made me think quite a lot whether I wanted to do something which I did not entirely master, precisely because, culturally, it did not belong to me. [...] The word 'behavior' that until then I had seen only related to manners—twice seven years apart—came to me and was redefined: first, as the name of a school which actually was a mild prison, with no bars; second, as a statement of power. When looking for its

translation, I saw it was also associated with movement, conduction, from one point to another." Whereas, "[...] Performance is already an Academy with a tradition against which we should work" ("Tania Bruguera | Debates (about Behavior Art)" n.d.).

Summary and Conclusions

In this double article I have proposed paying attention to the materiality of behavior, which stems from studies that address the philosophical question of the general origin of behavior and life itself. The article's structure arises from my readings of Bernard Stiegler's philosophy, which I developed with my text's authorial agency and a methodological mode of rhizomic writing. I did not intend to develop a central narrative; instead, I proposed theoretical explorations of topics conceptually organized as performative cays. They were situated above as islands of art and music philosophy, as well as more general philosophy concerning embodiment, cognition, and behavior. The conceptual default of behavior is lacking, and necessarily inadequate, and popular definitions generally overlook the activity of matter and the materiality of behavior. These approaches define behavior in abstract immaterial categories. Devellennes and Dillet claim that Stiegler is a Derridean new materialist thinker or at least is worthy of the attention of new materialist researchers, advancing technics to the forefront of new materialist agenda. Thus, I have explored behavior here in terms of tekhnē.

In Part One, I theoretically navigate the material relationship between behavior and the sensible. Sensibility is assumed to stem from organologically sculpting modes of perception and sensitivity that grow with material mediums. I theoretically refocus phenomenology on behavior in order to develop the mattering of retention as habits. My proposal consists in the development of this understanding to include a new materialist approach to the phenomenon of human behavior, which cannot be reduced to organized organic matter. In terms of a phenomenological behavioral retention that I advance in this paper, the habits of organizing organic and inorganic matter actively resist and anticipate the forces of dis-organization. In other words, behaviors are metastable repeated traces intra-acted between the habituations of both organizing organic matter and organized inorganic matter. The libido, desire, or historic transformations of the experience of the sensible, emerge within the boundaries of the relationship intra-acted between the living and the animating "dead." Life is understood by Stiegler as an active, temporary and localized, struggle against rises in entropy, as anti-entropy and as its dialectical negation, negentropy.

My approach follows a theoretical exploration that develops the Stieglerian undecidability and *différance* of the who and the what that is posed in the problem of anthropogenesis/technogenesis. My development focuses on behavior rather than action and performance because I view behaviors as technologies, repetitive programs subject to phenomenological retention and protention that form lifestyles. However, because of transduction (resistance) of the flow of captured energy, intra-acted behavior is always threatened by the possibility of its spontaneous extinction. In turn, I understand action in an Aristotelean fashion, as the materialization of potential energy—as in "passing to the act."

In my proposal of considering behavior in terms of its materiality, I indirectly approach debates about actions and intra-activities in Art Studies. Stiegler's philosophy advances the pharmacology of cutting and an organological analysis of the project of behaving. The agential capacities of various behaviors and habits are ones that follow or derive from agential cuts that are performed within the world's intra-activity. The who or what is humane is constitutive of urbanity, civility, that is constantly threatened by regression and requires care. I also philosophically thematize the double meaning of behavior within the dual composition of the pharmakon.

In the subsequent section of the article, I explore problematic definitions of behavior, which I understand philosophically as a phenomenon of existential retention and protention in matter (being and having). They signal that behaviors are general, repeatable, and controllable processes of organologically amassing already constituted relationships through established retentions between an organism, its environment, and itself. These definitions consider behavior as an abstract function or property of matter, including living and dead organisms. Obviously, there is a relational and regional history to the behaviors of matter, and this history is an important factor in the development of various artistic techniques and accidents. So, when thinking of the habits of organizing organic and inorganic matter constitutive of temporally organized endosomatic and exosomatic movements, I propose that the appropriate method for advancing the study of behaviors would be through general organology by using a common analogy to wood. Behaviors selectively develop in terms of their looks, feels, and complexity. Behavior can undergo quantification and repetition. Two considerations were provided, one in Heideggerian terminology in terms of presence-at-hand and readiness-at-hand, and the other in Merleau-Ponty's modes of being in-itself and for-itself. So, the problematics of behavior in terms of its definition revolve around equivocal definitions that tend to overlook the mattering of existential retention.

Part Two of the article consists of a composition of exploratory cays that relate with how behavior is material and how its meaning is practiced. I explore the situation when we say a certain behavior matters. Matter cannot be separated from the *esprit* or mind, and it cannot be isolated from other matter. Aesthetics is thought of as a philosophical practice of makingsense and selections. I explore the existential implications of the perceived phenomenon of "be-having" that becomes constitutive of states and disposition, or habits. Analyses that do touch upon the subject of behavior usually stop at banal conclusions that art challenges habits and fixed mechanistic behaviors, which ignores the ongoing iterative and performative processes of habits (hexis), which materialize. Art (techne), generally understood, is a working of habits and a fixing of aesthetically (sensory, feeling) orientated behavior that is not a mechanistic fixation. If we take an understanding of sensitivity as causal prefixed and determined reactions, which is to say that of the pair stimulus-reactions, then we fall into the trap of fixing the flesh into closed reflex system models, where stable unchanging systems need to be thought of as in place. This is to say that behavior's materiality is at once a perceptual (techno-epistemic) and an organological (ontic) problem. I do not have in mind the problem of habits as forms of fixed, mechanistic, never changing behaviors. I develop this in relation to the way musicians learn to behave.

By abstracting from the above-mentioned discipline of music, I generalize: all artwork is work that is a working of the artist by the material behavior that the artist "caripulates," which is a term I have developed in relation to manipulation. In order to become consciously aware of our own behavior, it must be submitted to a process of scrutiny and criticism by others, which is a factor of stimulation that changes the original behavior. I have formulated three distinctions of behavior with the support of Bernard Stiegler's analysis in the series *Technics and Time*. I understand them as marks and traces, techniques and technologies, from which consciousness and its memories as selections, that must include their protentions, come. When it comes to tertiary retentions, the recorded trace, which is organized inorganic matter, then we have come to live in an age where an exact repetition of a behavior is possible. Moreover, this exactitude of behavior is no longer something for the distanced gaze, of watching and re-watching various fantastic behaviors on the screen.

Pharmacology is a philosophical term used by Stiegler and originally developed by Plato, Michael Rinella, and Jacques Derrida. When saying matter is active, I understand it as matter that can be the source of aesthetic reac-

tions as well as bodily and social changes. In a "pharmacological" research perspective, then all matter is active in some regard. For the philosophy of art this could include any process that is beneficial or destructive, negentropic or entropic. The philosophical application of the pharmakon has given rise to the understanding of the pharmaco-logical as the discussions and theories organized by pharmaka. Dug-up roots and herbs that require cunning in their caripulation also interact with the flesh, which can grow or decay. The action of cutting is relevant to the notion of pharmakon, and as such, should be treated as a *techne*, which is to give shape and form through the cut that is at the root of the labor (as a birth) of all assembly that is a composed difference which is constructive and destructive at the same time. Behavior as a techne was unthought since it was considered a natural movement of the cosmos, of orderly behavior. The ethos of music was to instill masculine and feminine behaviors into its practitioners, catharsis was to wash away any lingering acting-out and misbehaviors from the fabric of society since Ancient Greece.

Therefore, the open, exploratory and active work of shaping thinking above is a theoretical proposal of paying attention to the materiality of behavior, which is considered as a kind of repetitive memory that individuates the Self and its associated milieu. Behavior, as an art or techne that cuts and gives shape to taste, is revalued in its conjectural habitual technicality as an ordered transformative socialized procedural habit (hexis). I note that hyper-industrial aesthetics consists in the programmed behavioral conditioning of responses and in learning how to pay sensory attention, or how to focus on the material sources of beauty, pleasure, reward, and so on. The industrialization of making-sense enacts a cognitive modification of the ways humans process various sensory stimuli, such as works of art and entertainment, according to selections (memory). As a techne, behavior is pharmacologically active, so it is a matter of "chemistry" or "magic," which manifests aesthetic dissonance (cuts of discomfort and comfort, emotional labor balancing satisfactions and frustrations) and the organological growth of artificial, physiological, and social bodies. Standard definitions of perceived and measurable phenomena of behavior overlook the activity of matter, which contains its own agency and meaning. Technique is considered an important type of appealingly shaping or stylizing behavior, which is more of a philosophy (analysis of meaning) or an art (expression and crafting of the Self in its retained organized ways of possessing its own being) than a science (instrumental).

Each behavioral technique is constituted by procedural, ongoing iterative and performative growth processes, habits [$\xi \xi \iota \varsigma$, $\xi \theta \circ \varsigma$], which are special temporal selected movements that influence the intra-active tendencies of both organic and inorganic organized matter. Behavior does not "exist." It appears and disappears. It is phenomenologically interpretable and temporal. As a techne, it orders the passage of time and happens in time. It can be ethnically cultivated and historically passed down (inherited) through the generations. Behaving can be judged in terms of its beauty, it can be well-done, or poorly executed. It is also saving and dooming.

Hence, behaviors have their aesthetics and are phenomena that qualify for greater philosophical review, at least via the problems of their presence-at-hand, readiness-at-hand, or considerations of behavior's ambiguity for-itself (subject) and in-itself (object). Behavior freed from the baggage of mechanistic behaviorism necessitates considerations in terms of its aesthetics, as tastes in *savoir-vivre* and *savoir-faire*, also understood as the origin or *arche* of all art, which is rooted in ordered gestures and movements that shape exosomatic organicity: material artifacts (artworks and technics), organizations and institutions (etiquette), and bodily sense perception itself (physiology).

Bibliography

- 1. Alaimo S. (2010), *Bodily Natures: Science, Environment, and the Material Self,* Bloomington: Indiana University Press.
- 2. Ariely D. (2009), *Predictably Irrational: The Hidden Forces That Shape Our Decisions*, New York, NY: Harper.
- 3. Ayoko O. B. & Ashkanasy N. M. (eds.) (2020), *Organizational Behaviour and the Physical Environment*, London, New York: Routledge Taylor & Francis Group.
- 4. Barad K. (2003), "Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter", [in:] *Signs: Journal of Women in Culture and Society*, 28 (3), The University of Chicago, pp. 801-831.
- 5. Barad K. (2007), *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*, Durham, NC: Duke University Press.
- Barad K. (2014), "Diffracting Diffraction: Cutting Together-Apart", Parallax, 20 (3), pp. 168-187, https://doi.org/10.1080/13534645.2014.927623.
- Barclay K. (2017), "New Materialism and the New History of Emotions", *Emotions: History, Culture, Society*, 1 (1), pp. 161-183, https://doi.org/10.1163/2208522X-00101008.
- 8. Barreiro J. & Vroegindeweij M. (2020), "New Materialist Becomings and Futurities: A Panel Intra-View", *Matter: Journal of New Materialist Research*, 1, pp. 138-154, https://doi.org/10.1344/jnmr.v1i1.30132.

9. Barrett L. F. (2018), *How Emotions Are Made: The Secret Life of the Brain*, Paperback edition, London: PAN Books.

- 10. Bernstein J. (2002), *Polymorphism in Molecular Crystals*, International Union of Crystallography Monographs on Crystallography 14, Oxford Clarendon Press, New York: Oxford University Press.
- 11. Betts J. G., Young K. A., Wise J. A., Johnson E., Poe B., Kruse D. H., Korol O., Johnson J. E., Womble M. & DeSaix P. (2013), *Introduction Anatomy and Physiology OpenStax*, [online] https://openstax.org/books/anatomy-and-physiology/pages/1-introduction [accessed: 19.01.2020].
- Bolt B. (2000), "Shedding Light For The Matter", Hypatia, 15 (2), pp. 202-216, https://doi.org/10.1111/j.1527-2001.2000.tb00323.x.
- 13. Bourguignon E., Rouget G. & Biebuyck B. (1991), "Music and Dance: A Theory of the Relations Between Music and Possession", *Man*, 26 (3), University of Chicago Press, https://doi.org/10.2307/2803912.
- 14. Bradley M. M. & Lang P. J. (2000), "Measuring Emotion: Behavior, Feeling, and Physiology", [in:] *Cognitive Neuroscience of Emotion*, pp. 242-276, Series in Affective Science, New York, NY, US: Oxford University Press.
- 15. Brennan T. J. & Lo A. W. (2011), "The Origin of Behavior", *MIT Web Domain*, March, [online] https://dspace.mit.edu/handle/1721.1/75346.
- 16. Brown F. J., Gillar D. (2015), "The 'strange death' of radical behaviourism", *The Psychologist*, 28, pp. 24-27, [online] https://thepsychologist.bps.org.uk/volume-28/january-2015/strange-death-radical-behaviourism [accessed: 19.01.2020].
- 17. Bruining D. (2013), "A Somatechnics of Moralism: New Materialism or Material Foundationalism", *Somatechnics*, 3 (1), pp. 149-168, https://doi.org/10.3366/soma.2013.0083.
- Carey T. (2019), "There's No Such Thing as Behavior", *Psychology Today*, [online] https://www.psychologytoday.com/us/blog/in-control/201908/there-s-no-such-thing-behavior [accessed: 19.01.2020].
- Cohen E. (2017), "Dare to Care: Between Stiegler's Mystagogy and Foucault's Aesthetics of Existence", Boundary 2, 44 (1), pp. 149-166, https://doi.org/10.1215/ 01903659-3725917.
- 20. Collins L. (2014), Making Sense: Art Practice and Transformative Therapeutics, https://doi.org/10.5040/9781472594419.
- 21. Coole D. (2013), "The Inertia of Matter and the Generativity of Flesh", *New Materialisms*, pp. 92-115, Duke University Press, https://doi.org/10.1215/97808 22392996-004.
- Coole D. H. & Frost S. (eds.) (2010), "New Materialisms: Ontology, Agency, and Politics", Duke University Press.
- 23. De Assis P. (2017), "Gilbert Simondon's 'Transduction' as Radical Immanence in Performance", *Performance Philosophy*, 3 (3), pp. 695, https://doi.org/10.21476/PP.2017.33140.
- 24. Delalande F. 2020, "The Invention of Sound", trans. A. Mróz, *MusiMid*, 1 (1), pp. 71-81.
- 25. Delaney P. F. & Austin J. (1998), "Memory as Behavior: The Importance of Acquisition and Remembering Strategies", *The Analysis of Verbal Behavior*, 15 (1), pp. 75-91, https://doi.org/10.1007/bf03392925.

 Devellennes C. & Dillet B. (2018), "Questioning New Materialisms: An Introduction", Theory, Culture & Society, 35 (7-8), pp. 5-20, https://doi.org/10.1177/02632764188 03432.

- Dillet B. (2017), "Proletarianization, Deproletarianization, and the Rise of the Amateur", *Boundary 2*, 44 (1), pp. 79-105, https://doi.org/10.1215/01903659-3725881.
- 28. Donin N. & Stiegler B. (2004), "Révolutions industrielles de la musique", *Cahiers de Médiologie*, 18.
- Duszak A. (ed.) (1997), Culture and Styles of Academic Discourse, Trends in Linguistics 104, Berlin, New York: Mouton de Gruyter.
- 30. Duszak A. (1998), "Academic Writing in English and Polish: Comparing and Subverting Genres", *International Journal of Applied Linguistics*, 8 (2), pp. 191-213, https://doi.org/10.1111/j.1473-4192.1998.tb00129.x.
- 31. Ehrenreich B. & English D. (2010), *Witches, Midwives, and Nurses: A History of Women Healers*, 2nd ed. New York City: Feminist Press at the City University of New York.
- 32. Everett D. L. (2012), Language: The Cultural Tool, London: Profile Books.
- 33. Everett D. L. (2019), How Language Began: The Story of Humanity's Greatest Invention, New York: W.W. Norton.
- 34. Faraone C. A. (2001), *Ancient Greek Love Magic*, 1. Harvard Univ. Press, paperback ed., 2. Cambridge, Mass.: Harvard Univ. Press.
- 35. Fitzpatrick N. (2014), "Symbolic Misery and Aesthetics Bernard Stiegler", *Proceedings of the European Society for Aesthetics*, 6, pp. 144-128.
- 36. Foucault M. (2012), *The Order of Things*, Taylor & Francis, [online] http://public.eblib.com/choice/publicfullrecord.aspx?p=240649.
- Gamble C. N., Hanan J. S., & Nail T. (2019), "What Is New Materialism?", *Angelaki Journal of the Theoretical Humanities*, 24 (6), pp. 111-134, https://doi.org/10.1080/0969725X.2019.1684704.
- 38. Gomes C., Thule C., Broman D., Larsen P. G. & Vangheluwe H. (2017), *Co-simulation:* State of the art, [online] http://arxiv.org/abs/1702.00686.
- 39. Graham G. (2019), "Behaviorism", [in:] *The Stanford Encyclopedia of Philosophy (Spring 2019 Edition)*, ed. Edward N. Zalta, [online] https://plato.stanford.edu/archives/spr2019/entries/behaviorism [accessed: 19.01.2020].
- 40. Harris K. (2019), *Why Is Left-Handed Wrong? The History Of Right-Handed Power*, [online] https://historydaily.org/why-does-left-mean-wrong [accessed: 19.01. 2020].
- 41. Hayles N. K. (2012), *How We Think: Digital Media and Contemporary Technogenesis*, Chicago: The University of Chicago Press.
- 42. von Herrmann F.W., Radloff B. (2011), "Dasein and Da-sein in *Being and Time* and in *Contributions to Philosophy* (From Enowning)", [in:] *Heidegger, Translation, and the Task of Thinking. Contributions To Phenomenology*, 65, eds. F. Schalow, Springer, Dordrecht.
- 43. Heweard W. L., Cooper J. O. (1992), "Radical behaviorism: A productive and needed philosophy for education", *Journal of Behavioral Education*, 2 (4), pp. 345-365, https://doi.org/10.1007/BF00952354.

44. Hillier J. (2007), Stretching beyond the Horizon: A Multiplanar Theory of Spatial Planning and Governance, Aldershot, England; Burlington, VT: Ashgate.

- 45. Hillman D. C. A. (2008), *The Chemical Muse: Drug Use and the Roots of Western Civilization*, 1st ed. New York: Thomas Dunne Books/St. Martin's Press.
- Holmes B. (2010), The Symptom and the Subject: The Emergence of the Physical Body in Ancient Greece, Princeton University Press, https://doi.org/10.1215/0961754x-2073398.
- 47. Holmes S. (2018), *The Rhetoric of Videogames as Embodied Practice: Procedural Habits*, New York: Routledge.
- 48. Homer, *Iliad | Loeb Classical Library*, [online] https://www.loebclassics.com/abstract/homer-iliad/1924/pb_LCL170. 531. xml? rskey=wGlx4q&result=1&mainRs Key=g9ov1b [accessed: 19.01.2020].
- 49. Hui Y. (2019), Recursivity and contingency, Rowman & Littlefield International.
- 50. Humphreys C. (2013), "Rhizomatic Writing and Pedagogy: Deleuze & Guattari and Heidegger", *The Journal of Educational Thought (JET) / Revue de La Pensée Éducative*, 46 (3), pp. 191-205.
- 51. Internation Collective (2020), *Bifurquer. Il n'y a pas d'alternative*, ed. B. Stiegler, Paris: Les Liens Qui Libèrent.
- 52. Irni S. (2013), "Sex, Power and Ontology: Exploring the Performativity of Hormones", *NORA Nordic Journal of Feminist and Gender Research*, 21 (1), pp. 41-56, https://doi.org/10.1080/08038740.2012.757249.
- 53. Jones A. (2015), "Material Traces: Performativity, Artistic 'Work,' and New Concepts of Agency", *TDR/The Drama Review*, 59 (4), pp. 18-35, https://doi.org/10.1162/DRAM_a_00494.
- 54. Kahneman D. (2012), Thinking, Fast and Slow, London: Penguin Books.
- 55. Kontturi K.K., Tiainen M., Nauha T., Angerer M.L. (2018), "Practicing New Materialisms in the Arts", *Ruukkuu Studies in Artistic Research*, 9 (March), [online] http://ruukku-journal.fi/en/issues/9 [accessed: 15.01.2020].
- 56. Keim N. C., Paulsen J. D., Zeravcic Z., Sastry S. & Nagel S. R. (2019), "Memory Formation in Matter", *Reviews of Modern Physics*, 91 (3), 035002, https://doi.org/10.1103/RevModPhys.91.035002.
- 57. Kelly L. (2016), *The Memory Code*, London: Atlantic Books.
- 58. Kessler N. H. (2019), *Ontology and Closeness in Human-Nature Relationships: Beyond Dualisms, Materialism and Posthumanism*, [online] https://erable.inrs.ca:2048/login?url=https://doi.org/10.1007/978-3-319-99274-7.
- 59. Kilbourne W. E., Dorsch M. J. & Thyroff A. (2018), "Theorizing Materialism through the Institutional Analysis and Development Framework", *Marketing Theory*, 18 (1), pp. 55-74, https://doi.org/10.1177/1470593117724610.
- 60. Kirby V. (1997), *Telling Flesh: The Substance of the Corporeal*, New York: Routledge.
- 61. Klein N. (2008), *The Shock Doctrine: The Rise of Disaster Capitalism*, New York: Picador/H. Holt and Co.
- 62. Kleinman A. & Barad K. (2012), "Intra-actions", Mousse Magazine, 34, pp. 76-81.
- 63. Kloekhorst A. (2008), "Etymological dictionary of the Hittite inherited lexicon", [in:] *Leiden Indo-European Etymological Dictionary Series*, Issue 5, https://doi.org/papers://F2C580B0-67EE-4725-B125-85F907FC36C4/Paper/p238.
- 64. Kontturi K.K. (2018), Ways of Following, London: Open Humanities Press.

65. Koppensteiner M., Primes G., Stephan P. (2017), "Create Your Own Stimulus: Manipulating Movements According to Social Categories", *PLOS ONE*, 12 (3), e0174422, https://doi.org/10.1371/journal.pone.0174422.

- 66. Krzykawski M. (2019), "Why Is New Materialism Not the Answer? Approaching Hyper-Matter, Reinventing the Sense of Critique Beyond 'Theory'", *Praktyka Teoretyczna*, 34 (4), pp. 73-105, https://doi.org/10.14746/prt2019.4.5.
- 67. Lapworth A. (2015), "Habit, Art, and the Plasticity of the Subject: The Ontogenetic Shock of the Bioart Encounter", *Cultural Geographies*, 22 (1), pp. 85-102.
- 68. Larson B. C., Jensen R. P. & Lehman N. (2012), "The Chemical Origin of Behavior Is Rooted in Abiogenesis", *Life: Open Access Journal*, 2 (4), pp. 313-322, https://doi.org/10.3390/life2040313.
- 69. Lazzeri F. (2014), "On defining behavior: some notes", [in:] *Behavior and Philosophy*, Vol. 42, pp. 65-82, Cambridge Center for Behavioral Studies (CCBS), https://doi.org/10.2307/behaphil.42.65.
- 70. Le Brun A. (2018), Ce Qui n'a Pas de Prix: Beauté, Laideur et Politique, Les Essais, Paris: Stock.
- 71. Lloyd G. E. R. (1962), "Right and Left in Greek Philosophy", *The Journal of Hellenic Studies*, 82, pp. 56-66, https://doi.org/10.2307/628543.
- 72. Massumi B. (1992), *A User's Guide to Capitalism and Schizophrenia: Deviations from Deleuze and Guattari*, A. Swerve edition, Cambridge, Mass: MIT Press.
- 73. Mechner F. (2019), "A Naturalistic and Behavioral Theory of Aesthetics", *The Polish Journal of Aesthetics*, 52 (1), pp. 73-93, https://doi.org/10.19205/52.19.4.
- 74. Melser D. (2004), The Act of Thinking, Cambridge, Mass: MIT Press.
- 75. Merleau-Ponty M. (1963), *The Structure of Behavior*, trans. Alden L. Fisher, Boston: Beacon Press.
- 76. Miguens S. (2015), "Could There Be a Logical Alien? The Austere Reading of Wittgenstein and the Nature of Logical Truths", [in:] *Mind, Language and Action*, eds. Danièle Moyal-Sharrock, Volker Munz and Annalisa Coliva. Berlin, München, Boston: De Gruyter. https://doi.org/10.1515/9783110378795.283.
- 77. Millikan R. G. (1993), *White Queen psychology and other essays for Alice*, Cambridge: MIT Press.
- 78. Montes-Santiago J. (2013), "The lead-poisoned genius: Saturnism in famous artists across five centuries", [in:] *Progress in Brain Research*, Vol. 203, pp. 223-240, Elsevier B.V., https://doi.org/10.1016/B978-0-444-62730-8.00009-8.
- 79. Moore J. (2008), *Conceptual foundations of radical behaviorism*, Hudson, NY: Sloan Educational Publishing.
- 80. Mróz A. (2019a), "Aesthetic Dissonance. On Behavior, Values, and Experience through New Media", *Hybris*, 47 (4), pp. 1-21.
- 81. Mróz A. (2019b), "Towards Behavioral Aesthetics", *The Polish Journal of Aesthetics*, 52 (1), pp. 95-111, https://doi.org/10.19205/52.19.5.
- 82. Parikka J. (2007), "Contagion and Repetition: On the Viral Logic of Network Culture", 22.
- 83. Parry R. (2020), "Episteme and Techne", [in:] *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, Summer 2020, Metaphysics Research Lab, Stanford University, [online] https://plato.stanford.edu/archives/sum2020/entries/episteme-techne/ [accessed: 15.01.2020].

84. Paxton A., Griffiths T. L. (2017), "Finding the traces of behavioral and cognitive processes in big data and naturally occurring datasets", *Behavior Research Methods*, 49, 5, pp. 1630-1638, https://doi.org/10.3758/s13428-017-0874-x.

- 85. Peters F. E. (1967), *Greek Philosophical Terms: A Historical Lexicon*, New York: New York University Press.
- 86. Pokorny J. (2017), *Indo-European Etymological Dictionary Indogermanisches Etymologisches Woerterbuch (J. Pokorny*), [online] https://academiaprisca.org/indoeuropean.html [accessed: 19.01.2020].
- 87. Preus A. (2007), *Historical Dictionary of Ancient Greek Philosophy. Historical Dictionaries of Religions, Philosophies, and Movements*, No. 78, Lanham, Md: Scarecrow Press.
- 88. Raihani N. J. (2013), "Nudge Politics: Efficacy and Ethics", *Frontiers in Psychology*, 4, https://doi.org/10.3389/fpsyg.2013.00972.
- 89. Rao M., Gershon M. D. (2016), "The Bowel and beyond: The Enteric Nervous System in Neurological Disorders", *Nature Reviews Gastroenterology & Hepatology*, 13 (9), pp. 517-528, https://doi.org/10.1038/nrgastro.2016.107.
- 90. Sampson T. R., Mazmanian S. K. (2015), "Control of Brain Development, Function, and Behavior by the Microbiome", *Cell Host & Microbe*, 17 (5), pp. 565-576, https://doi.org/10.1016/j.chom.2015.04.011.
- 91. Sanzo K. (2018), "New Materialism(s). Critical Posthumanism Network", [online] https://criticalposthumanism.net/new-materialisms/.
- 92. Skinner B. F. (2002). *Beyond Freedom & Dignity*, Indianapolis, Ind: Hackett Pub.
- 93. Stark W. (2016), *New Materialism*, Intra-Action, [online] https://newmaterialism.eu/almanac/i/intra-action.html [accessed: 15.01.2020].
- 94. Stiegler B. (2018), *On the Need for a Hyper-Materialist Epistemology*, Nanjing, China, [online] https://www.academia.edu/36553634/Bernard_Stiegler_On_the_Need_for _a_Hyper-Materialist_Epistemology_2018_ [accessed: 19.01.2020].
- 95. Stiegler B. (1998a), *Technics and Time, 1. The Fault of Epimetheus,* trans. George Collins and Richard Beardsworth, Stanford: Stanford University Press.
- 96. Stiegler B. (1998b), *Technics and Time, 2. Disorientation*, trans. Stephen Barker, Stanford: Stanford University Press.
- 97. Stiegler B. (2009), *Acting Out*, trans. David Barison, Patrick Crogan and Daniel Ross, Stanford: Stanford University Press.
- 98. Stiegler B. (2010), *Time and De-proletarianisation. Art and Teaching Art in Post-Consumerist Culture*, [in:] *ArtFutures—Current issues in higher arts education*, eds. K. Corcoran & C. Delfos, European League of Institutes of the Arts, pp. 10-19.
- 99. Stiegler B. (2011a), *Technics and Time 3: Cinematic Time and the Question of Malaise*, trans. Stephen Barker, Stanford: Stanford University Press.
- 100. Stiegler B. (2011b), "The Tongue of the Eye: What 'Art History' Means", [in:] *Releasing the Image: From Literature to New Media*, Stanford, CA: Stanford University Press, pp. 222-235.
- Stiegler B. (2014a), Symbolic Misery, Vol. 1: The Hyperindustrial Epoch. Symbolic Misery, Cambridge, England: Polity Press, https://doi.org/10.1353/con.2010.0011.
- 102. Stiegler B. (2014b), *The Re-Enchantment of the World: The Value of Spirit against Industrial Populism*, trans. Trevor Arthur, Philosophy, Aesthetics and Cultural Theory, London: Bloomsbury.

103. Stiegler B. (2015), *Symbolic Misery. Vol. 2. The Catastrophe of the Sensible*, Cambridge, England: Polity Press.

- Stiegler B. (2017a), "Kant, Art, and Time", trans. Stephen Barker and Arne De Boever, Boundary 2, 44 (1), pp. 19-34, https://doi.org/10.1215/01903659-37 25845.
- 105. Stiegler B. (2017b), "The Quarrel of the Amateurs", trans. Robert Hughes, *Boundary* 2, 44 (1), pp. 35-52, https://doi.org/10.1215/01903659-3725857.
- 106. Stiegler B. (2017c), "What Is Called Caring?: Beyond the Anthropocene", trans. Daniel Ross, *Techné: Research in Philosophy and Technology*, 21 (2), pp. 386-404, https://doi.org/10.5840/techne201712479.
- Stiegler B. (2018), The Neganthropocene, trans. Daniel Ross, London: Open Humanities Press.
- 108. Stiegler B. (ed.) (2020), *The Logical Alien: Conant and His Critics*, Cambridge, Massachusetts, London, England: Harvard University Press.
- 109. Stiegler B. (2020a), Nanjing Lectures (2016-2019), Open Humanities Press.
- 110. Stiegler B. (2020b), "Elements for a General Organology", *Derrida Today*, 13 (1), pp. 72-94, https://doi.org/10.3366/drt.2020.0220.
- 111. Stiegler B., Petit P. & Bontems V. (2008), *Economie de l'hypermatériel et psycho-pouvoir*, Mille et une nuits.
- 112. Stienstra J., Alonso M. B., Wensveen S. & Kuenen S. (2012), "How to Design for Transformation of Behavior through Interactive Materiality", [in:] *Proceedings of the 7th Nordic Conference on Human-Computer Interaction Making Sense Through Design NordiCHI '12*, 21, Copenhagen, Denmark: ACM Press, https://doi.org/10.1145/2399016.2399020.
- 113. Talon-Hugon C. (n.d.), *The Powers of Art. Aesthetic experience, emotion, knowledge, behavior | ANR*, [online] https://anr.fr/en/funded-projects-and-impact/funded-projects/project/funded/project/b2d9d3668f92a3b9fbbf7866072501ef-efc7567e c6/?tx_anrprojects_funded%5Bcontroller%5D=Funded&cHash=6ef0f38adb808ad1 dbf608da7cfab690 [accessed: 19.01.2020].
- 114. "Tania Bruguera | Debates (about Behavior Art)", n.d., [online] https://www.tania-bruguera.com/cms/474-0-Debates+about+Behavior+Art.htm [accessed: 15.05. 2020].
- 115. "The Dictionary of Obscure Sorrows", n.d., [online] https://www.dictionaryof-obscuresorrows.com/ [accessed: 17.05.2020].
- 116. The Institute of Philosophy of the Jagiellonian University in Kraków (2018), *Aktual-ności The Polish Journal of Aesthetics Uniwersytet Jagielloński*, [online] https://pjaesthetics. uj. edu. pl/news/-/journal_content/56_INSTANCE_QVPUmCgE7dXG/138 618288/138651697 [accessed: 19.01.2020].
- 117. Thaler R. H. and Sunstein C. R. (2009), *Nudge: Improving Decisions about Health, Wealth and Happiness*, London: Penguin Books.
- 118. Tillman R. (2015), Toward a New Materialism: Matter as Dynamic, *Minding Nature*, 8 (1), pp. 30-35.
- 119. Vale R., Evans D. A. & Branco T. (2017), "Rapid Spatial Learning Controls Instinctive Defensive Behavior in Mice", *Current Biology*, 27 (9), pp. 1342-1349, https://doi.org/10.1016/j.cub.2017.03.031.

120. Velthuis O. and Coslor E. (2012), The Financialization Of Art, Oxford University Press, https://doi.org/10.1093/oxfordhb/9780199590162.013.0025.

- 121. "Vocabulary—English version | Ars Industrialis", (n.d.), [online] http://www.arsindustrialis.org/vocabulary-english-version [accessed: 23.06.2020].
- 122. Whaley L. (2011), "The Wise-Woman as Healer: Popular Medicine, Witchcraft and Magic", [in:] *Women and the Practice of Medical Care in Early Modern Europe, 1400-1800*, London: Palgrave Macmillan UK, pp. 174-195.
- 123. Wiktionary (2020), *Reconstruction:Proto-Indo-European/tetk*-, [online], https://en.wiktionary.org/wiki/Reconstruction:Proto-Indo-European/tetk- [accessed: 19.01. 2020].
- 124. Willats S. (2010), *The Artist as an Instigator of Changes in Social Cognitation and Behaviour*, London: Occasional Papers.
- 125. WordNet (2009), *Definition of behavior*, [online] http://wordnetweb.princeton.edu/perl/webwn?s=behavior [accessed: 15.01.2020].
- 126. Yamamoto S. (2013), "Invention and Modification of New Tool-Use Behavior BT", [in:] *Encyclopedia of Creativity, Invention, Innovation and Entrepreneurship*, ed. Elias G. Carayannis, New York, NY: Springer, pp. 1131-1139, https://doi.org/10.1007/978-1-4614-3858-8 373.
- 127. York R. A. & Fernald R. D. (2017), "The Repeated Evolution of Behavior", *Frontiers in Ecology and Evolution*, 4, [online] https://doi.org/10.3389/fevo.2016.00143.