



naturalizing aesthetics

edited by Ewa Chudoba and Krystyna Wilkoszewska



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Introduction

Naturalizing Aesthetics is a volume which has grown out from the 19th International Congress of Aesthetics which was held in late July 2013 in Krakow (Poland). The papers selected show new openings for the field which is in a constant fluctuation. The book aims to provide the readers with an assessment of the newest state of research on naturalist aesthetics, understood in the broadest way. This is reflected in the title phrase referring to Denis Dutton's text *Let's Naturalize Aesthetics!*, which can be seen as a starting point for a rich journey into the depth of nowadays aesthetics.

The vision of the discipline which emerges from the volume is not limited to the theory of art, what is more, such a limited meaning of aesthetics is only sometimes touched by the authors who are mainly interested in naturalistic, environmental, or ecological aspects of reality with art being only one part of it. Art and its theoretical problems, although present in the book, are not in any way privileged.

The volume starts with the section *Reconsidering Nature*, in which two texts present two different angles for appreciating reality. The first one, authored by Laura Menatti (*Geophilosophy: a New Approach to the Study of Nature and Landscape*), stresses its rhizomatic, horizontal, network character. The other, written by Maria Urmă (*Mathematics and Art, Art and Mathematics*), follows a different line of reasoning, regarding the mathematics present in nature as the main pattern for art. These two perspectives are not contradictory, however, as they both include what the respective other position lacks, being therefore complementary. The two articles seen together create a kind of a merged perspective, which is needed to fully understand *Naturalizing Aesthetics* as it is neither homogenous nor cohesive. On the contrary, the texts gathered in the volume evoke a complex, diverse and multidimensional atmosphere both of

today's world (as well as its challenges) and the aesthetics which tries to narrate its complexity and diversity.

Plentiful stances, which include both abundant and creative reasonings as well as multifold approaches, intertwine with one another within the book. The central part of it entitled – *Ecological, Environmental and Evolutionary Aesthetics* puts the reader in the middle of the current discussion on naturalization in aesthetics. The pivotal unit takes into consideration both mainstream, postmodern, cognitive perspectives as well as the peripheral, modernist, historical angles. The first ones are presented by the following authors: Zhuofei Wang promotes “Neue Phänomenologie” as her main methodology in the article: *On the Term “Body” in the Eco-Aesthetics – From the Perspective of the New Phenomenology*; Barbora Bakošová in *Environmentally Engaged Art/Science Collaboration and Aesthetic Appreciation of the Environment* uses Allen Carlson’s environmentalism for forging her reasoning. Michael Ranta’s text *Art, Aesthetic Value, and Beauty: On the Evolutionary Foundations of “Narrative Resemblance Concepts”* deals with postmodern definitions of art and their narrative shade with a special reference to Noël Carroll. Laura Di Summa-Knoop scrutinizes Denis Dutton’s Naturalist Definition of Art in a highly creative format in her *The Dialogue of Philosophical Aesthetics. A Response to Naturalist Definitions of Art*. Jerzy Luty in his theoretical text: *From The Art Instinct to The Artful Species. Evolutionary Explanations, the Problem of Defining Art, and Some Minor Remarks on the Growing Field* discusses all kinds of difficulties in the field of evolutionary aesthetics nowadays. The second perspective includes texts authored by: Karel Stribal, who shows connections between Czech evolutionary thought and Czech aesthetics (*Traditions in the Czech Aesthetics of Nature: Between Biology and Philosophy*) and Gloria Luque Moya, who features Deweyan aesthetics by comparing and contrasting it with Scharfstein’s stance (*On Birds, Beasts and Human Beings. An Approach to the Continuity between Art and Life.*)

The third part of the volume – *Aesthetics of Nature and Body* is a unique section wholly devoted to Chinese aesthetics and its various naturalistic dimensions. Weilin Fang in the text *Being Open to Nature: the Aesthetic Dimension of Anoxism* promotes a contemporary philosophical current – anoixism and its parallel and synonymous variation called phoenixism. Anoixism believes that free will is deeply rooted in human nature and as such has become an intrinsic imperative for every human being in all aspects of life. Staying open to this natural calling lets people create new things as well as attitudes. Moreover, human entity is an open container integrating all rages of oppositions (e.g. naturalism and humanism, pragmatism and idealism) which lead to experiencing life as an everlasting flow. Beauty and harmony are important qualities in this process

being a result of a constant interplay between both objective and subjective factors, never sticking to one of them.

The other side of the problem is present in Lingling Peng's article *On the T'ai chi chu'uan of Somaesthetics and Chinese Classic Culture*, where she links traditional bodily practices with Shusterman's somaesthetics concentrating both on practical and theoretical sides of the subject. In her perspective, human being, to activate his or her inner human nature, needs to follow nature itself. Motor sets of the human body, performed during doing T'ai chi, are similar to e.g. a breeze blowing over the water. This stance lets her not only overcome some anthropocentric and dualistic aspects still observed in the Western approach towards the body, but also concentrate on some aesthetic factors of achieving enlightenment through T'ai chi, such as: harmony, softness and grace. The different aspects of bodily training in everyday life are analyzed by Tao Sun in *Knowledge of the World and Art of Life: Based On the "Cultivation of Body"*. He concentrates on Xiushen and its relations to Taoizm and Confucian teaching showing their similarities towards body, which turns out to be not only flesh but a complicated moral and spiritual tool of communicating between people in their surroundings. These two texts confirm that the body as a multidimensional phenomenon stands in the center of today's Chinese aesthetics.

Last, but not least, the volume is closed by a section on bioart and biotechnology unit with texts by Sebastián Lomelí and Akihisa Iwaki. In his *The Poetic Possibilities of Ge-stell*, Lomelí draws a map of both bioartists and biocritics (such as Eduardo Kac, George Gessert, Eugene Thacker, Robert Mitchell and Nicole Karafyllis among others) trying to establish relations between them and put the whole picture in the theoretical perspective. He distinguishes Heidegger's approach, which relays on constellation thinking as it promotes viewing technology as hermeneutics of conjunct practices. Lomelí believes that bioart as a whole is best understood when we interpret it in the moment it captures dynamically the joints between different pieces of biotechnological art, in other words, for him, bioart is a constant and poetical "work in process". On the other hand, Iwaki in the text *Brain Incorporated into the Machine* opts for more rigid and linear way of thinking about biotechnology as, first, he narrows his perspective down to neurotechnology and second, he mainly presents the neuro- and cultural possibilities of *Necomimi* (a popular Japanese neurotoy invented in 2011, which expresses people's emotional state before they start talking) with a reference to neuroscience. However, the postmodern stance gathers Iwasaki's attention eventually, when he explains the gadget in details, without influencing his clear reasoning at any point. The closing biounit creates a kind of contrasting juxtaposition for the opening one because it sophisticatedly replaces what

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was done in *Reconsidering Nature*, namely its modernist tools turn out to be multidimensional and dynamic, whereas the postmodern approach reveals its linear and logical aspects. The paradox like this is probably only possible to exist in today's aesthetics.

Having no final conclusion, *Naturalizing Aesthetics* is open to establishing new possibilities for further naturalization of the discipline which, as it stems from the book, can clearly enrich the traditional philosophical approach to the world. Aesthetics seems to be more and more independent as a field, emancipated both from fine arts and narrow, traditional academia. What we consider to be intriguing and refreshing about the papers assembled in this book is not only its variety and pluralism, but a constant interplay between the postmodern outlook and the modernist one, between the dualistic and holistic perspective, and the linear and circular thinking. As thus the papers compose a dynamic, flickering fabric of contemporary aesthetics.

Ewa Chudoba
Krakow; March 4th, 2015



1 Reconsidering Nature

Geophilosophy: a New Approach to the Study of Nature and Landscape

1. Geophilosophy: against naturalism of concepts

Geophilosophy is the 20th century interdisciplinary philosophical line of research that develops a culturalistic approach which focuses on the study of the contemporary issues of place and space by conducting a genealogical analysis of terms such as landscape, milieu and territory. The term “geophilosophy” was first introduced by the French philosopher Gilles Deleuze with the aim of reorienting philosophical thought away from temporality and historicity towards spatiality and geography. Deleuze argued that thinking (in the philosophical sense, as he quotes Kant and Husserl in the first lines of his essay) takes place in the relation between Earth and territory.¹ Furthermore, he adds that a concept is not an object, but a territory; in fact, about philosophy, he says: “Philosophy is reterritorialized on the concept. The concept is not an object but a territory. It does not have an object but a territory. For that very reason it has a past form, a present form and, perhaps, a form to come.”² He was also the first to introduce terms such as deterritorialization and territorialisation, which are used nowadays in environmental aesthetics. According to Deleuze, territorialisation and deterritorialization³ are two movements belonging to the Earth and involved in the creation of ideas. Indeed, he identifies a deep theoretical connection between Ancient Greek philosophy and the *poleis*, as well as between the Modern Age philosophy and the Modern State.

Coherently with this line of thought, I state that there is an important relation between philosophical concepts and the places from which these thoughts grow and pour out of. Thus, the discussion about space, place and landscape is neither a trivial matter, nor merely a realistic issue: they are not natural terms but, rather, they have a cultural meaning in relation with a specific historical period (or a period belonging to the history of ideas). This project starts from a deep theoretical and conceptual genealogy of terms such as nature, landscape, space,

and place. I consider them not merely as objective and universally valid terms, but as relative to the culture and identity that uses them. This idea entails a precise critique of reductionism and naturalism in the methodology of social science: there are no universal, natural, and unmediated notions of space and place.

2. The genealogy of terms such as nature, place, space and landscape; the notion of landscape.

I assert that there is a cultural factor in the theory of space, place and landscape that, from the scientific point of view, is as relevant as their extrinsic physical qualifications (this does not necessary imply a mere relation of determination, neither a temporal priority). Space is, indeed, a symbolic form belonging to a specific culture: for this reason, I advocate the thesis according to which we cannot recur to a univocal, physical and naturalized conception of space. Erwin Panofsky,⁴ for example, while speaking about the invention of Perspective in the Renaissance, sustains the non-universality and non-realism of the concept of space; he argues that the Modern system of space representation involves a specific approach of the Modern subject, in perceiving and representing the environment.

The Modern subject, with “his single and immobile eye”, develops an actual subjective optical vision both in terms of artistic representation and determination of the space around him as “infinite and unchanging and homogeneous space.”⁵ I sustain a preeminence of the concept of place in the Ancient societies (considered as Greek, Latin, Western and Eastern societies), considering it as something that involves a symbolic, religious and mythical relationship between the historical man and the environment. Contemporary philosophers and anthropologists, e.g. Edward Casey⁶ argue that, since the Enlightenment brought the dominance of Western science, “space” has been taken as self-evidently prior to place. Space has been considered the general abstract featureless condition in which culture can occur, while place is just a local particular. On the contrary Casey, along with many other writers (e.g. Tim Ingold⁷ and Jeff Malpas⁸), specifies that place comes first and that space is a product of the specific philosophical thought of the Moderns. In the case of modern thinkers, from Descartes to Leibniz, Casey speaks about a “disdain” for the specialness of place and of *genius loci*. According to the American phenomenologist, Western philosophers and scientists of the seventeenth and eighteenth centuries assumed that places were merely momentary subdivisions of a universal space quantitatively determined in its neutral homogeneity.

Thus during the history of representation of the world and the history of image, a transition from a “transcendent” representation (where the subject does not determine what surrounds himself, but he is a part of a cosmological order) to

a “transcendental” presentation occurs: when the Cartesian subject, considered as *res cogitans* and *ens* separated and detached from the world, enters into relation with space and time through abstract, intellectual, and rational categories. This opposition underlies a crucial metaphysical theme in the Heideggerian terminology: for Heidegger, in fact, the technical and Cartesian space of the Modern Age is related to globalization and to a specific kind of subjectivity; on the contrary the Ancient Greek man dwells in the fourfold (the *Geviert*), the metaphysical and ontological bound between earth, sky, the divine and mortals, consequently living in a harmonious relationship with the environment, by feeling and forming a part of the Cosmos.⁹

From this standpoint I also bring forward the thesis that the distinction between a relational and historical place versus an anonymous, homologated and globalized space lies also at the bottom of Marc Augé’s thought.¹⁰ In fact the French anthropologist draws a sharp-cut division between places and non-places, as airports, railways, shopping malls, considered as globalized areas towards which the subject cannot develop any emotional and identitarian feeling. The same distinction can be read in Creswell,¹¹ in his book dedicated to Yi Fu Tuan, and in many other scholars for whom place is a ‘meaningful location’, and space is a more abstract concept. Space is usually considered as the outer-space or the space of geometry. On the contrary place is taken to mean history, identity¹² and relationship.

2.1. The notion of landscape: connection between aesthetics and ecology

Augustine Berque¹³ in comparing Western and Chinese landscape, affirms that some societies were not landscape-aware. Berque, quoting the famous assertion by Cézanne that the peasants of Provence had never “seen” (from an esthetical and artistic point of view) the Montaigne Sainte Victoire, argues that many societies have worked with the environment, but never wondered about landscape. For many authors, landscape has been invented by city-dwellers and artists during the Modern Age, while the civilization of ancient Greece did not have in its language a world for landscape. An aesthetic conception of landscape emerged both in China, about two thousand years ago, and in Europe during the 15th century, within the Flemish art.

I think that the concept of landscape deserves to be considered apart from other concepts. Especially in the last century, a lot of interdisciplinary landscape studies were produced, considering “landscape” as the visible shape of a place, or in some cases as a substitute of the place itself, abandoning the idea of the

landscape as something merely aesthetic, such as a view, or a postcard. I propose to consider the European Landscape Convention (Florence, 2000) as the final result of the overcoming of the previous approach to the study of landscape; this document constitutes an attempt at considering landscape as deeply important in creating the identity of a culture. As the Preamble of the Convention says: “the landscape is an important part of the quality of life for people everywhere: in urban areas and in the countryside, in degraded areas as well as in areas of high quality”. The European Landscape convention is furthermore determinant for a new concept of landscape as a place (the landscape is considered as the visible shape of the place, any kind of place), and as something belonging to the people and chosen by them: landscape means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors; consequently, speaking about landscape means speaking about the identity and the political guidelines of a community. Hence a new meaning of landscape emerges as the relation between people and land or territory. This relation concerns the perceptive schema, the symbolic, memorial and historical heritage, all things that make a landscape a “milieu” or a context of life. In the Convention “landscape” is considered as our living context, natural and inherited, where people preserve identity, diversity and the sense of community.

3. Processual landscape and the connection with ecological psychology by James J. Gibson

One of the aims of my approach and current research is to relate the question of landscape to the ecological issue. As a geophilosopher I believe in the necessity of interdisciplinarity. In addition, I think that the conceptualization of landscape, space and place in the history of ecology and in ecological studies, is a crucial complement to the history of these concepts in the humanities. There are, in fact, some interesting ideas about the connection between cultural landscape and ecology (Nassauer 2007¹⁴), and for this reason I connect the ecology of perception with the cultural theory of landscape, conceiving the landscape as the product of the interaction between culture and the affordances (a notion elaborated by J. Gibson¹⁵) of a place. This relationship is neither a matter of realism, nor a mere conceptual determination; on the contrary landscape is considered as in evolution, a processual interaction between the environment (and the complexity of the affordances and invariants) and the perceiver in the place, who, through his nature and culture, creates a relationship with the environment. I call this relation “processual landscape” (fig 1). Even though the issue of place is often considered only as cultural, concerning humanities or, at

most, human geography, I argue that, the study of landscape, space and place should comprehend also “the ecology of perception”.

This expression was introduced in 1979 by J. Gibson as an extension – and an overcoming, from a certain point of view – of the Gestalt psychology: Gibson explicitly points out his debt to Kurt Koffka. The ecology of perception is an approach to visual perception in which the latter is not reduced to the dynamic between the stimulus and responses, but it consists in the relation between the affordances of the environment and the perceiver, in a deep interconnection in which the philosophical dichotomy between the subject and object of traditional cognitive science becomes obsolete. The central idea of Gibson’s psychology is the necessity to move psychology out of the laboratories to which it has been confined, to replace investigation that proceeds through the use of stimuli that are often biased and artificial, and to characterize perception as a relation between organism and environment. This is the main methodological indication. In addition, Gibson specifies that there is not one vision only (only one perceptive resultant), that there is not only the “aperture” vision, concerning the basic configuration of the object, as if we were looking at something through a hole in a fence, but in reality, vision requires free movement of the head (“ambient” vision) and free movement of the body (“ambulatory” vision). Looking around and getting around do not fit into the standard idea of what visual perception is and, according to Gibson (and to the experiments he conducted on the optic ambient array rather than on fixed vision, or “snapshot vision”) the visual awareness is in fact panoramic and does persist during long acts of locomotion. The reason is that the perceiver finds himself in an ecosystem. This is the fundamental step through which it is possible to exit the Cartesian world and enter the world of ecosystems, organisms and, as a geophilosopher I can add, the world of places. An important reader of the work of Gibson, Tim Ingold, points out that

As the founder of ecological psychology, James Gibson, argued in his classic work on visual perception, the forms of the objects we see are specified by transformations in the pattern of reflected light reaching our eyes as we move about in their vicinity. We perceive, in short, not from a fixed point but along what Gibson calls a “path of observation”, a continuous itinerary of movement [...] if perception is thus a function of movement, then what we perceive must, at least in part, depend on how we move. Locomotion, not cognition, must be the starting point for the study of perceptual activity.¹⁶

In addition, when discussing his own perceptual theory and confronting it with Gibson’s, Ingold quotes Merleau Ponty. The idea of a perceiver embedded in the world is elaborated from a philosophical point of view in Merleau Ponty’s

work, and then pursued by Gibson's theory, in a psychological perspective. There are deep differences between the two frameworks, but they share a non-objectivist perspective on vision.¹⁷ In addressing the problem of perception in opposition to classical cognitivism and to classical empirism, Gibson develops a non-representational idea of cognition; (that does not need representation or computation), but that occurs directly¹⁸ through what he calls "direct pick up of information", and that is embodied and integrated in the environment. In order to specify the moment of perception and to exemplify the epistemic relation between perceiver and medium, Gibson introduces the concept of affordance. He describes what environment affords to animals: terrain, water, fire, objects, tools, and other animals. The crucial point is to understand how environment affords (gives the possibility of) perception and action. The composition and the layout of surfaces constitute what they afford, and an affordance emerges only when different characteristics of individuals, such as their physical dimensions and abilities, social needs and personal intensions, are matched with the features of environment. According to a simplified interpretation of Gibson's book, the affordance is usually considered as a property of the natural environment, offered to the animal and the human being in action. But two specifications are required: first of all, affordance is neither a property, not a-priori, nor a universal measure. It is something unique for every animal and it belongs to (and emerges within) the relationship between the environment and the perceiver.¹⁹ Different layouts afford different behaviors for different animals and different mechanical encounters. Different substances of the environment have different affordances for nutrition and manufacture. Different objects of the environment have different affordances for manipulation. Also animals and human beings reciprocally afford a complex set of interactions. On the basis of this characterization of the concept of affordance we can assert that Gibson's realism cannot be considered as a naïve one. On the other hand, the affordance is neither subjective: affordances are properties of things considered with respect to an observer, and not properties of the experiences of the observer only. They are not subjective values; they are not feelings like pleasure or pain added to a neutral perception. There has been an endless debate among philosophers and psychologists as to whether values are physical or phenomenal, in the world of matter or only in the world of mind. For affordances as distinguished from values, the debate does not apply. Affordances are neither in the one world or the other inasmuch as the theory of the two worlds is rejected. There is only one environment, although it contains many observers with limitless opportunities for them to live in it.²⁰ In addition, the perceiver (a human being) is not a Cartesian subject (characterized in its contemporary version by the hardware/software dichotomy). Gibson, in fact,

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adds that natural vision depends on the eyes in the head on a body supported by the ground, the brain being only the central organ of a complete visual system. An affordance cuts across the subjective-objective dichotomy and helps us to understand its inadequacy. It is a fact of the environment as much as a fact of the behavior; it is both psychical and physical.²¹ According to him it is also a mistake to separate the cultural environment from the natural one, as if there were a world of mental products distinct from the world of material products. In the end the issue of realism does not seem to be so relevant for the ecological psychology: there is only one world, however diverse, and all animals live in it. A holistic approach is therefore more appropriate, and the non-separation between nature and culture is an element emphasized by other scholars who supported similar ideas on perception (e.g. Gregory Bateson, who cannot be defined a realist, or Tim Ingold who develops Bateson's ideas and talks about "fluid space" that seems to be similar to the concept of "fluid of perception" provided by Gibson). A. Berque, another important landscape scholar, when discussing affordances, adds that they can be considered the landscape itself:

Nous dirons qu'elles sont dans le paysage, et même, qu'elles sont le paysage en tant que médiation. Des conceptions assez voisines, mais encore plus radicalement non-dualiste, se retrouvent dans l'approche de l'*énaction* qu'a formulée Francisco Varela. Celle-ci récuse l'idée positiviste selon la quelle nous percevrions un monde pré donnée ou préétabli, qui précéderait l'expérience du sujet de la perception. C'est la structure sensori-motrice du sujet lui-même, c'est-à-dire son corps à la fois percevant et agissant, qui guiderait sa perception dans le monde.²²

We will say that they [the affordances] are in the landscape and, at the same time, they are the landscape, considered as mediation. Very similar concepts, but more radically non-dualistic, are found in the approach of the *enaction*, a theory which has been formulated by Francisco Varela. That theory challenges the positivist idea according to which we would perceive a pre-given or pre-established world that would precede the subject's experience of perception. It is the sensorimotor structure of the subject itself, that is to say his body both perceiving and acting, who will guide his perception in the world. [trans. L. Menatti]

The affordances, thus, are revealed as perceptual characteristics during the interaction between the environment and the perceiver. Therefore the concept of affordance can be used to create a bridge between geophilosophy, with its culturalistic approach, and the ecological thought. The place needs to be considered as an autonomous entity (a processual entity) within which the human cultural beings are in a deep relationship. This statement allows us to overcome the idea of a mere aesthetical landscape, as well as the idea of a cultural landscape that can

simply be determined by people. Affordance is a biological term that enables us to think about landscape as a complex system, that affords or not the relation with us.

Human beings and landscape (constituted by affordances) are in a mutual and dynamical relation. The perception of an affordance is not a process in which we perceive a value-free physical object to which a meaning is somehow added arbitrarily, but it is a process of perceiving a value-rich ecological object. At the same time, living in a place implies perceiving its affordance, constituted in the relationship between human beings and the environment. There is not an anonymous place out there, but an ecological system, in which the cultural element plays an important role. The idea that emerges from this view is what I call “processual landscape”.

4. A rhizome of landscapes

The rhizome (from the ancient Greek rizo-, root) is a biological term that denotes the modification of the underground stem of a plant. If a rhizome is separated into pieces, each piece may give rise to a new plant. In *Thousand Plateaus*²³, the concept of rhizome is used to denote a network in which, unlike in the tree-like organizations, any node can immediately connect with any other node. Networks replace hierarchies, but it is too trivial to associate the rhizome with the net: rhizome also involves the idea of process and it is aimed at explaining the relation between different concepts, which are only apparently in opposition. In fact, the notion of rhizome can express the relation between global and local, between space and place, as a conceptual model of the complexity of spatial systems and of the new configurations of globalized space. Carl Gustav Jung used the metaphor of rhizome to speak about the deep and invisible nature of life; Deleuze uses it to introduce a new model of science, language and space. Deleuze’s idea of space constitutes a pragmatics of the transit, of the dissemination of the sense (as Derrida would say) and it never closes the figure of space, that is, it is never completely defined and enclosed. Thus the rhizome can be used to denote a processual network of landscapes. Applying this concept to the question of landscape has the two following consequences: (1) inside the rhizome we have different processual landscapes. By processual landscape I mean every mutual relationship belonging to and constituting a landscape and involving the coupling of nature and culture, human being and environment, ecology and history of ideas; (2) the identities of landscapes are not something fixed, pre-given, unchanging and decided a-priori, but landscape is always in evolution. Thus I can assert that the contemporary configuration of places implies a collection of rhizomatic landscapes mutually defined. Furthermore, I suggest that rhizome is an open system: it involves the

idea of a global space formed by multiple landscapes. Each landscape can be connected with others without necessarily following a unique and fixed trajectory. The production of places and landscapes happens according to different scales and relational modalities. The rhizome is a source of diversity: from the cartographic point of view it opens up infinite possibilities. The rhizome has never an end but, rather, “a milieu from which it grows and which it overflows. It constitutes linear multiplicities with n dimensions having neither subject nor object, which can be laid out on a plane of consistency, and from which the one is always subtracted.”²⁴ Thus the rhizome refers to the multiplicity of places, as well as to the important concept of milieu: Deleuze, in fact, uses the latter to denote the core of such a place-space, which is related to symbolic elements that are not always in evidence. I think that one of the challenges of thinking about the identity of place is constituted by elaborating a new concept of space made of a multiplicity of milieux. The concept of milieu is as crucial as the rhizome. The term is used in contemporary geography to denote places, landscapes and territories filled with cultural and social elements. We were not born in a milieu, but we create a milieu by an elective and emotional relationship. The concept of milieu allows us to go beyond the idea of place as something original, sedentary, and given by birth. Without the need to recur to a deterministic approach, we can say that the environment affords us to build a milieu. I think that the milieu is the historical, memorial, and at the same time potential, core of a landscape, according to a nondeterministic interpretative grammar that focuses on the relation between culture and nature. For this reason I think that the rhizomatic global space can be considered as made of milieux, multiple contexts, which constitute different places that we have to take care of.

Endotes

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18. Gibson strongly argued against indirect perception. He claimed that organism directly perceives meaning from the environment and that this happens at the level of medium, surfaces, substances and events that are relevant to the organism's lives and not at the level of dimension of physics. In the flow of perception the human perceiver directly picks up affordances.
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Mathematics and Art, Art and Mathematics

At first sight, the two domains of mathematics and art appear to be incompatible, complete opposites. This is because there are too few artistic mathematicians and too few mathematical artists. Let us analyse this idea from both points of view.

Mathematics and art

Mathematics is in everything. Abstract, rational and difficult to access, it is constantly seeking the truth. It finds it in the form of a formula or generally valid equations. Such equations, which reduce the truth to its essence, are applicable in physics, astronomy, biology and all the sciences. However, these mathematical truths are not found only in the sciences but also in art. Also, surprising connections can be made with philosophical methods.

It is possible to make a comparison between scientific discoveries, philosophical concepts and the evolution of art. There are similarities between the way in which the world was created, understood and the manner in which it has been portrayed. Thus, in Antiquity, Aristotle maintained that the Earth is at the centre of the universe, a fixed sphere around which the other planets move, in circular orbits. According to this cosmic theory, space was understood to be the place occupied by an object. For this reason, from Antiquity until the Middle Ages, in architecture, sculpture values mass as opposed to void. The important thing was the object, not the interior or exterior space. The Egyptian pyramids and Greek temples are immense sculptures in space rather than functional buildings. The massive castles and cathedrals of the Romanesque period, with their thick walls and small windows, are imposingly present in space.

Maria Urmă



Giza pyramid complex,
2620–2500 BC



Parthenon, 447–432 BC



Cluny Abbey,
10th C

The Gothic period is a time of transit towards another type of space. Beginning with the Renaissance, space is understood differently, becoming a place that contains something. Scientific discoveries contribute towards this. Copernicus invalidates the geocentric theory: the Earth is not at the centre of the Universe, the Sun is. Thus, space becomes a receptacle, the Universe being a place in which the planets move. The idea that the Sun is at the centre explains the Renaissance preference for circular forms, as the perfect figure, as the expression of a unique, absolute centre. Architectural shapes give a greater importance to the content of space: domes, arches and porches are built. Sculptures come away from the wall, are located in free space to be seen from every direction.



Brunelleschi's dome,
1420



Palazzo Ducale, Urbino
1468–1482



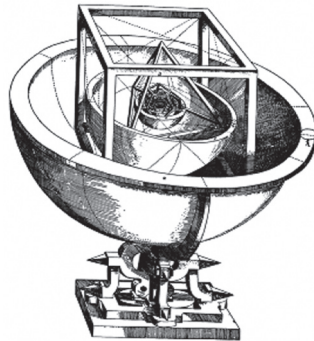
Verocchio, Statue of Colleoni,
1483–1488

These similarities in concept between science and art demonstrate that there is a connection between mathematics and art. Behind all scientific discoveries lie mathematical discoveries. Through the intermediary of mathematics, the truth is revealed to the world in its essence.

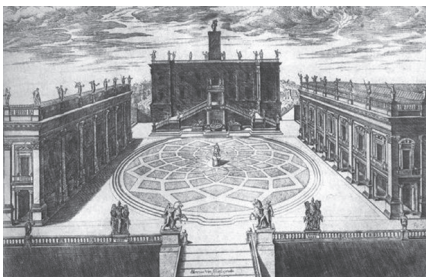
The connection between mathematics and art can be demonstrated with a discovery of Kepler's from 1596, which refers to proportion.¹ Thus, Kepler, through a geometrical game, discovers that between the spheres generated by the orbital paths of the six planets known at that time (Saturn, Jupiter, Mars,

Mathematics and Art, Art and Mathematics

Earth, Venus, Mercury), each of the five possible regular polygons can be inscribed: cube, tetrahedron, dodecahedron, octahedron, icosahedron. Even though it was later found that the orbits of planets are not circular but elliptical, the initial discovery was not invalidated, as the irregularity of ellipses is very small. Kepler's discovery demonstrates that our solar system respects the laws of universal harmony. The next planets to be discovered (Uranus in 1781, Neptune in 1846, Pluto in 1930) repeat the rule in Kepler's theory. This acknowledgement of the distance between the planets as perfect geometrical proportion caused Kepler to exclaim: "Credo spatioso numen in orbe! (I strongly believe that the Earth is in essence divine!)"²



The discovery that the planets move around the Sun in elliptical orbits may explain the preference for elliptical shapes in the Baroque period.



Michelangelo, Campidoglio Square, 1568



Borromini, 1638



Bernini, 1656–1667

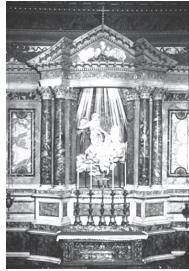
Returning to the course of history, in the relationship between art, science and philosophy, we need to mention that the discoveries of Galileo Galilei (1564–1642) and Isaac Newton (1662–1727) have had important influences

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on our knowledge. Compared to the previous periods, very different ways of thinking appear. Aristotle believed in the state of rest, or rather the Earth being in a position of rest. For Newton, an event hasn't got a definite place in space. This preoccupation with movement and the relativity of rest is reflected in the Baroque style of dynamic figures and shapes. The discoveries that have offered a model of the world on a large scale are expressed in Baroque art through an overview about space.



Rubens, 1618



Bernini, 1645-1652



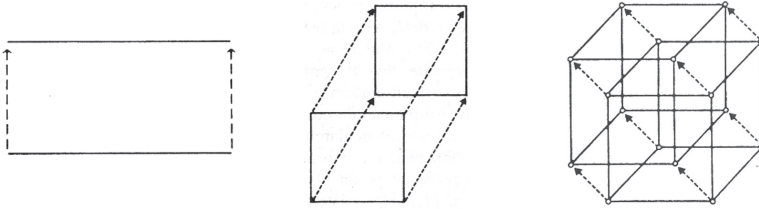
Nicola Salvi, 1732-1762

Interest in light, shown even in the Baroque period, links space to time. Maxwell's theory of electromagnetism (1865) and Einstein's special theory of relativity (1905) are equations that consolidate considerable knowledge. Space and time become relative. There is no longer a concept of an object being completely separate from space: material is space and space is the place that is identical to the material. Artistic and architectural styles will have contradictory orientations, due to this relativity.

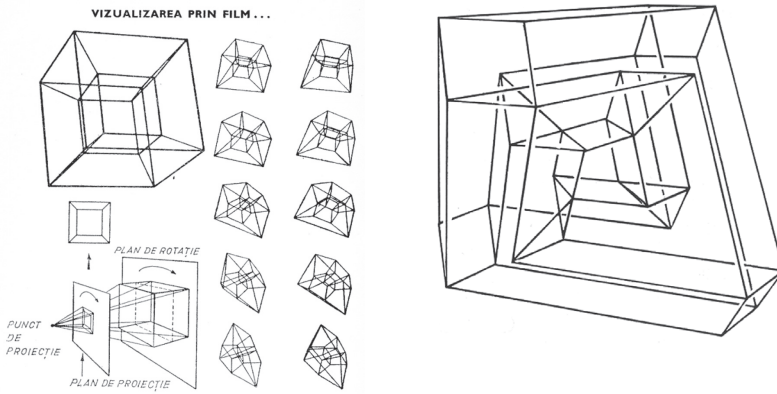
In a different way, the theory of relativity refers to the concept of space having four dimensions, the fourth of which is time. In searching for the fourth dimension, Joffret and Poincaré, (Einstein's contemporaries), are convinced that the fourth dimension is unperceivable. However, it can be deduced in a rational way:

- a point is an infinite part of a line
- a line is an infinite part of a plane
- a plane is an infinite part of a volume

Therefore, by analogy, a volume is an infinite part of a four-dimensional object (an n-cube or an hypercube). The impossibility of understanding such objects does not prove that they do not exist.³



Abraham Moles shows how this four-dimensional shape, which only a computer can conceive, can be visualised in a space with three dimensions.⁴ In a similar way, Scott E. Kim (1978) makes a detailed description of a *four dimensional cube*.⁵



These mathematical speculations have had repercussions at an artistic level. The possible existence of a fourth dimension estranged painters from their traditional representation in perspective, of the depth of space. Plastic space was reduced to bidimensionality.



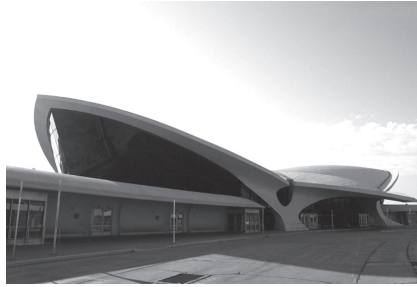
Jackson Pollock

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The notion of space-time continuity is expressed in architecture through a complete communication between interior and exterior space. New construction materials (reinforced concrete, tensioned cables, composite materials) have led to the construction of synergic structures, which together have an organic character.



La Corbusier, Ronchamps Chapel, 1954



Eero Saarinen, Kennedy Airport, 1962

The relativisation of space has had serious consequences on geometry. At the end of the nineteenth century, it is shown that Euclidian geometry is one of the infinite geometries that use variable axioms. Lobachevsky (1792–1856) and Riemann (1826–1866) use non-Euclidean geometries as a basis. Non-Euclidean geometries could be used from the moment in which Einstein demonstrated that space is non-Euclidean. In the general theory of relativity, *the space – time* is not plane but curved. In non-Euclidian geometries, a plane surface is replaced with a curved surface. The perpendicular relationship becomes relative. Due to the curvature of space, rays of light no longer extend in straight lines. A preference in the field of shape for continuous structures of the synergic type can be explained by this transition from the straight line to the curve.

Twentieth century art can be symbolised by time. Time appears to be expressed in all the styles of the century.

Cubism creates another method of representation. Bodies are no longer viewed from one particular place but from many places. An object is represented in the same picture with more sides.

Mathematics and Art, Art and Mathematics



Picasso, 1910



Georges Braque, 1913



Juan Gris, 1919

In Futuristic art, artists follow time in its evolution. Movement is captured in successive phases. In architecture, space flows simultaneously with time.



Duchamp, 1912



Boccioni, 1913

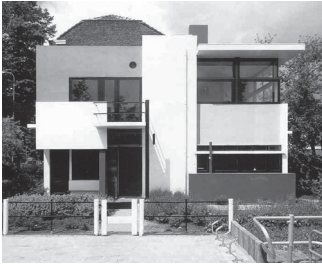
In Abstract art, space is annulled. It reduces everything to the bidimensional. The opposition of front-back disappears. Time makes its presence felt in gestural art.



Jackson Pollock

Maria Urmă

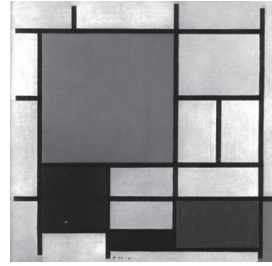
In architecture, the study is made in two dimensions, in plane, according to functionalistic principles. By way of compensation, the accent is put on the study of proportion.



Gerrit Rietveld, 1924

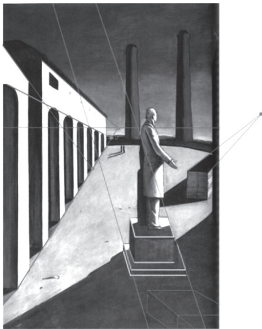


Gerrit Rietveld, 1923

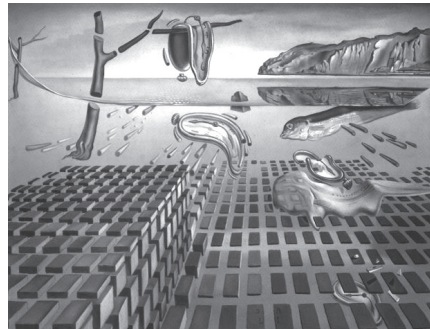


Mondrian, 1931

Surrealists value space on more levels. Giorgio de Chirico and Salvador Dali use perspective as an expression of temporality. In the same pictures, conic perspective and axonometry appear, creating an illusion of two parallel worlds. The many vanishing points make the idea of space relative.



Chirico, 1925



Dali, 1931

From this journey in art and science we observe that there are similarities between philosophical and scientific concepts, and artistic manifestations. All of these discoveries and tendencies needed to have appeared when they did, as a mechanism in the world order.

Art and mathematics

Visual arts and mathematics

Until now, we have followed the relationship between mathematics and art. Yet what happens if we begin with art and look at its relationship with mathematics?

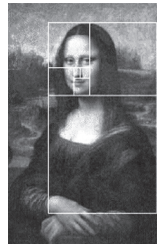
Mathematics is found hidden in the contents of works of art. Artists do not look for geometrical structures in a rational, logic way. They do not follow a logical approach, rational in its creation process. They would sooner submit to an impulsive, irrational, unconscious approach. They seek the truth in ways that differ from those of mathematicians.

For example, to paraphrase Charles Bouleau, we should sooner speak of *a secret geometry in painting* rather than *a secret geometry of painters*.⁶ This is because painters do not intentionally begin with specific geometrical sketches. Despite all of this, in the end, there are geometrical sketches hidden in what they create.

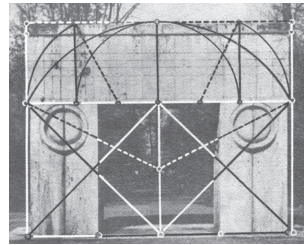
In general, artists do not impose the use of the golden section in their work. And yet the golden section can be found in any work of art. It can also be found in nature. This is because the golden section is a geometrical representation of a universal harmony. During the Renaissance, they said “de divina proportione” (the proportion of God).



The Parthenon, 447–432 BC

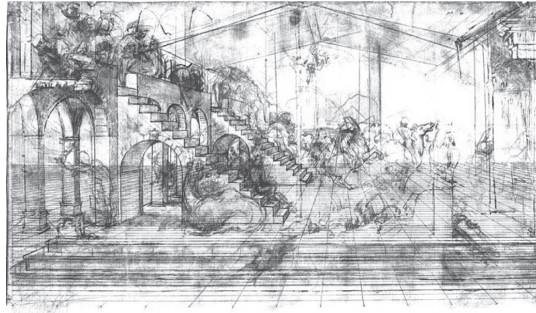


Da Vinci,
1503–1506



Brâncuși, *The Gate of the Kiss*,
1938

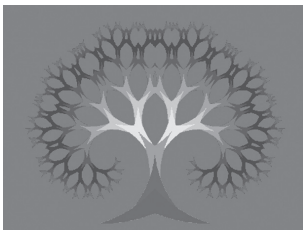
Perspective came about from the desire of artists to represent the depth of space. For this they appealed to complex geometrical constructions.



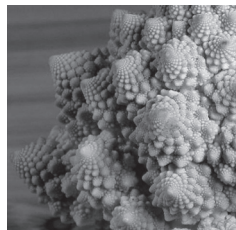
Leonardo da Vinci, *Adoration of the Magi*, perspective study, 1481

Fractal Theory, which refers to the fragmentation, scattering of figures and forms according to constant rules, preoccupies more and more artists. It is not purely a geometrical model that infinitely divides forms. It is also a model of nature. Perhaps this is why artists are fascinated by this representation.

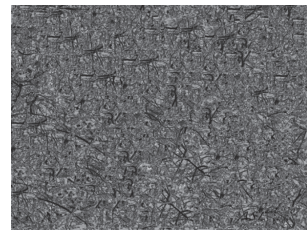
In general, artists do not look to use the fractal theory in their work. Despite this, certain works of art can be studied from this viewpoint. Thus, the paintings of Jackson Pollock, and in general, the forms and composition of abstract art, can be understood as the fractal structures of the world. The interest of artists in fractals was probably generated by the appearance of computer art. Fractals are generally made by computer programmes and play a large part in computer-generated art works.



Digital art fractals

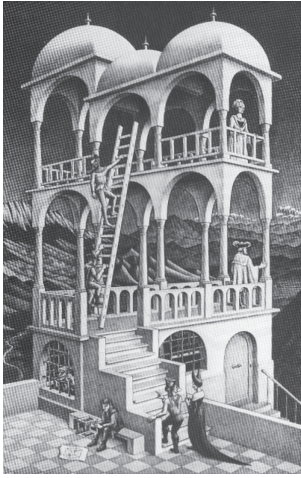


Natural fractals

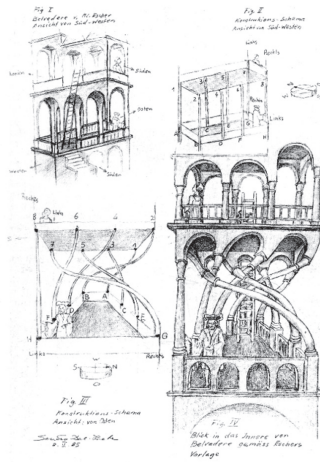


Jackson Pollock's fractals

Art has its own potential for exploration, far from mathematical logic. When it was attempted to transpose Escher's drawings in reality, the result were very complex, sometimes impossible structures.⁷ The computer and of course, mathematics, comes to the aid of these transpositions.



Escher, *Belvedere*, 1958



Sandro del Petre, *Escher's "Belvedere"*, 1985

In general, in the evolution of the visual arts, their remoteness or proximity to geometry can be observed. For example, Islamic art is in a certain sense closer to mathematics than Byzantine art. Here, the human figure is replaced by geometrical figures. This is evident in the wide variety of architectural decorations. Alhambra Palace in Granada is a visual museum of symmetrical figures.⁸

But, as Matila Ghyka and other theorists have shown, visual arts are not the only arts in which mathematics can be found.

Mathematics and music

Mathematics makes its presence known in time as well as in space. Pythagoras drew attention to the mathematical basis of music notes.⁹ The Greeks, good mathematicians, were the first people to study the concept of consonant/dissonant. Important musical concepts can be explained and understood in a logical way through the intermediary of mathematics. Music theorists use mathematics to explain music. In Antiquity (in China, Egypt and Mesopotamia) people studied the mathematical principals of sound whilst ancient Greeks investigated music scales using numbers.

Harmony is the common denominator in music, mathematics and the visual arts. In our days we speak about the “effect of Mozart” in the sense that listening to classical music even from childhood benefits the development of spatial intelligence, abstract thinking and creativity.¹⁰ Similarly, the shape of instruments, in terms of geometrical representation, corresponds with the harmony of sound.

Literature and mathematics

Through the intermediary of music, mathematics is to a poem, what the melodic line is to the verse, the relationship between tone and semitone is what it is between an accentuated and none accentuated syllable.

It is likely that authors such as Dostoievski and Tolstoy used mathematical logic in the structure and epic journey of their novels. Lewis Carroll, the creator of *Alice in Wonderland* was a mathematician whose speciality was logic. In fact a careful reading of *Alice in Wonderland* exhibits the striking role of paradox and contradiction.¹¹

Grammar and syntax are also common to both: languages and mathematics. According to some authors, the connection between mathematics and literature is not as strong as that between mathematics and music or mathematics and the visual arts.

A question appears: What do these two domains have in common, if this connection exists, and ...what are the differences between them?

Differences:

Mathematics uses an abstract, rigorous language and stringent standard of proof and peer review.¹² Art is subjective, less precise, and the judging criteria are irregular and relative.

Mathematics uses a thought process that is logical, abstract, rational, investigating the consciousness. It uses a precise thinking. The arts use the emotions and impulses of their creator, exploring the unconscious.

Mathematics makes demands on the rational, the arts on intuition.

Mathematics seeks the truth. The arts seek beauty. Beauty is subjective. The truth is objective and recognised by everyone. Between the truth and beauty there is an apparent contradiction. In mathematics, the road towards the truth is beautiful. Finally, we appreciate the beauty of the last truth, the conclusion.

Similarities:

Both the arts and mathematics unfold away from day to day life.

The arts have a pronounced creator character, as with mathematics. Both the arts and mathematics count on spontaneity. Inspiration plays a fundamental role in both domains...

Both are characterised by harmony. In mathematics, there is an elegance about the language of logic; in art there is a harmony of proportions.

Mathematics is a metaphor for the laws of physics and nature. Art operates with metaphors, using archetypal forms and emotional impulses.

Mathematics and Art, Art and Mathematics

Both the arts and mathematics use symbols.

Both are characterised as being universal. Old mathematical ideas can be adapted, on the move, to suit new situations. Major works of art permanently offer something new.

Both explore the unknown, looking for the answers to fundamental questions: what is the world, what is the meaning of life?

What is the current situation regarding this connection? At a world level, there are many people who are preoccupied with both: art and mathematics. There are professional organisations emerging in this duality and there are vast museums in this domain.

Endnotes

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2

Ecological, Environmental
and Evolutionary Aesthetics

ZHUOFEI WANG

On the Term “Body” in Eco-Aesthetics – From the Perspective of New Phenomenology

In the current debate about eco-aesthetics, the reflection on the aesthetic relationship between human and nature from the dimension of body has become a significant subject. In the light of the original meaning of aesthetics as a perception doctrine, many eco-aestheticians have already investigated a variety of aesthetic experiences in the natural environment and attempted to stress the pivotal role of the body in the interaction between human and nature. As far as the motivation and significance of such research are concerned, the contemporary German aesthetician Gernot Böhme has explained very explicitly: people live in the world primarily in the form of flesh and blood.¹ Only when they realize the man-made destruction of the natural world with their own bodies can they really attach great importance to the present ecological problems.²

Like most research in this field, an exploration of body's functions and features in the eco-aesthetic activities will be the central interest of this article as well. In order to broaden the research perspective in this topic, I will introduce the viewpoint of “the new phenomenology” (*Neue Phänomenologie*) which was established by the German philosopher Hermann Schmitz (1928–) in the 1960s. With regard to its train of thought, new phenomenology follows the idea of general phenomenological theories, namely it strictly adheres to describing what happens in the phenomena themselves³. In the meantime, unlike other research in this field, the new phenomenology lays emphasis on the special relationship between the conditions that lead to such phenomena and the perceptual state of human beings.⁴ Because of this, it pays particular attention to “the involuntary life experiences” (*unwillkürliche Lebenserfahrungen*) and tries to reveal the pre-theoretical body phenomena which are often neglected by traditional studies stressing too much “the abstract basis” (*Abstraktionsbasis*) during the analyses and evaluations.⁵ By now the principles and methods of new phenomenology

have been successfully applied to various research areas, including philosophy, ethics, law, anthropology, theology and aesthetics. In this sense, new phenomenology can be referred to as a practical science.

With the relative theories of new phenomenology, this paper intends to answer the following two questions: Firstly, how can our body contribute to enhancing the aesthetic awareness of human-nature inseparability? Secondly, to what extent can the human natural and social qualities harmonize with each other in this process? Although new phenomenology has never expanded its thoughts to the eco-aesthetic field, we will see that its explanations concerning the body can also provide important inspirations for our present research.

I

First of all, it's necessary to clarify three key concepts of new phenomenology, namely body, bodily communication and quasi-object, which will lay foundations for our further analysis. Firstly, the term "body" (*Leib*) in the new phenomenological discourse is different from the word "soma" (*Körper*) which is often regarded as the object of natural science. Various parts of the soma (eyes, ears, mouth, nose, tongue...) have fixed positions, constant distances between each other and distinct sensory functions (sight, hearing, smell, taste, touch...).⁶ On the contrary, the body denotes a dynamic and variable structure of perception. Sometimes it appears in particular areas which are called "body islands" (*Leibinseln*),⁷ take for example the moving chest and abdomen in the process of respiration (inspiration and expiration). Sometimes it extends to all parts of the soma as an indivisible perceptual unity⁸ and is represented by a holistic feeling such as fear, pleasure, frustration, anxiety, disgust or tiredness. Although we can experience this kind of feeling at first hand, it is difficult for us to tell its exact location. In addition, other than the stable sensual schema of the soma, the bodily perceptive structure may momentarily appear and disappear,⁹ which presents an impregnable barrier to the determination of the body's precise limit. So the body is free from the domination of the position and distance principles and able to coordinate its different components at the same time. In this regard, we can say that the body "doesn't have surfaces forming the boundary" and hence shows a "pre-dimensional" (*prädimensional*) character.¹⁰

Starting from the body's definition, new phenomenology essentially regards the human perception as bodily communication.¹¹ A representative form in this respect is "embody-path" (*Einleibung*) in which the essential elements of an event, namely facts, problems and programs don't emerge in turn, but instantaneously appear as a diffuse unified whole which combines multiple

meanings together.¹² For instance, if someone's leg is stung by an insect, he will scratch the irritated area with his hand at lightning speed. Although this person scarcely has time to exactly calculate the distance between the hand and the bitten part, his action will be accomplished accurately. In such a way, a communication relation is established between two seemingly unrelated areas inside the body.¹³ The bodily communication between humans can be encountered everywhere in daily life. First each of us is familiar with the following experience: on crowded sidewalks, appropriate visual contact between pedestrians may help them immediately select the right routes to avoid possible collision with others.¹⁴ One aspect of the communication between human beings and objects, often mentioned by Schmitz, is the case of accident avoidance. When "a driver" (human) pushes hard on the brake pedal to avoid collision with "another vehicle" (object), it's urgently necessary that he should instantly grasp all the relevant components – facts, problems (the risk of collision and the possible danger during the avoidance) and rescue programs, and then responds effectively.¹⁵ So we can see that in the context of the new phenomenology, the bodily communication actually pervades every area of life. It exists not only inside the body, but also between human beings, between humans and other living species, and even between humans and inanimate objects. In a word, where there is body, there is body communication.

In the body communication, what can be perceived are not so-called "objects" (*Dinge*), but "quasi-objects" (*Halbdinge*) which are characterized by the following three aspects: firstly, having some properties of the object¹⁶ and at the same time keeping a certain distance from the perceiving subject, the quasi-object has objectivity and independence to some extent. Secondly, as a kind of pure potential thing, the object can change its way of phenomenal existence,¹⁷ while the quasi-object cannot achieve that, because it itself is a part of the phenomenon.¹⁸ Speaking more exactly, the quasi-object is the realization of the object in the phenomenal world. Finally, the existential properties of the quasi-object can be confirmed only in the case of the intervention of the perceiving subject. Thus, the quasi-object is strongly correlated with the human body.¹⁹ In some sense, without the presence of the body, there would be no quasi-object.²⁰ Due to the manifold of the individual perceptual states, it's possible that the same object could appear as different manifestations in different situations, which shows the multi-dimensional quality of the quasi-object. So it's clear that the existence and characteristics of the quasi-object depend on the conditions of both the potential object and the perceiving subject. Viewed from this angle, the quasi-object can be considered as a symbol of the co-presence of subject and object.

II

In terms of the above analysis, let's consider the first issue posed at the beginning of the article, namely "the key role of the body in experiencing the unity of human and nature." First of all, new phenomenology reminds us that the body is the basis of human existence in the world,²¹ that is, human survival is ensured primarily through his own body. In this respect, the body is no longer a neutral substance, but an irreplaceable form of self-existence²² which relates above all to "a natural being" (*Naturwesen*). In our context, such a natural being deals with something inartificial and particularly emphasizes what is inherent in the human body.²³ Or rather, it stresses the innate communication abilities of the body which are displayed in a spontaneous and automatic way "without dependence of any other apparatus."²⁴

Here, it's necessary to notice that in many cases the awareness of human naturalness is not self-evident. Often through negative experience, especially in life-threatening situations, people could recognize their own natural attributes. For example, as one of the fundamental preconditions for human existence, "the respiration is a typical experience of human naturalness."²⁵ More precisely, it is "an experience of human 'creatureliness' (*Kreatürlichkeit*)."²⁶ However, owing to the ease of breathing in daily life, people often ignore their dependence on air. Only in the event of scarce air, they will realize that they are a kind of air being and an inseparable part of the natural world. From this viewpoint, we may conclude that the body communication concerns not only the perception of the environment, but also the consciousness of human internal natural properties. As regards the human respiration, this is mainly reflected both in the interaction between respiratory organs and air and in the feeling of the uniqueness as a breathing animal. In this sense, Böhme underlines that it is an important task for the present aesthetic research to develop and enhance the consciousness of a human as a natural being and integrate it into self-understanding.²⁷

In addition, from the perspective of new phenomenology, the outer natural world has an intimate association with our body. Precisely speaking, as our own nature, the body determines our relationship with the environment.²⁸ New phenomenology shows that the natural scenes which we experience, e.g. seasons, day and night, sunshine, wind, rain, thunder or lightning, are "not the immediate, objective and absolute reality,"²⁹ but the natural phenomena known as quasi-objects which can be only grasped by a co-present body-being. In other words, the approach to the external natural world cannot be taken separately from our perception. So it stands to reason that people usually use some attributes when describing the quasi-objects,³⁰ such as "brilliant" sunshine, "tender" music

and "glacial" wind. In this connection, it may be considered that the nature exists for us human beings. From the point of view of aesthetics as a perception doctrine, this means that the natural phenomena "can only be experienced in an aesthetic way."³¹

So we can see that with the function of the body, human and natural environment are closely integrated with each other and merged into a unified and organic whole. Inside this system, the subject and object have formed some kind of resonance and hence created a specific atmosphere.³² In this aspect, the aesthetic significance consists not solely in internal or external nature, but primarily in a unique interdependency between them.

In the background of modern aesthetics based on the philosophy of subjectivity, the aesthetic exploration of nature is usually dependent on a subjective interpretation.³³ It is a common opinion that the properties of aesthetic objects relate only to "the human faculty of cognition and...human ways of looking at the world,"³⁴ that is to say, "only within this intentional horizon, determined by our subjectivity, can suitable features of objects have the effect of triggering the experience of beauty."³⁵ The above idea gives us the impression that things "are beautiful for us because we ascribe this quality to them...on the basis of our constitution as subjects."³⁶ However, its crucial mistake is that the elements of the object side which play an indispensable role in causing the subjective reaction are in a large part ignored³⁷ and thus the balance between natural objects and body experience is not explored in depth. In contrast, the new phenomenology fundamentally views the human being as a body-being. Starting from this position, it investigates the interplay between human and nature and therefore provides an alternative for the modern aesthetics under the control of the subjectivity-philosophy. Here, the body is presented as a symbol for the intersection between the external and internal natural experiences.³⁸ Taken in this sense, human is no longer a totally rational being standing opposite to the natural world, but "an ecological body-environment-complex"³⁹ which signifies his dissociable link with nature.

III

Now let's think about the second issue – "the reconciliation of the human natural and social qualities within the eco-aesthetic process." As it has been repeatedly emphasized, new phenomenology concentrates on the living body experience and its development and variations in all kinds of situations. In this regard, the body, primarily as a form of natural existence, refers to human "primitive presence" (*primitive Gegenwart*) which is made up of five fundamental factors: "I" (*Ich*),

“Here” (*Hier*), “Now” (*Jetzt*), “This” (*Dieses*) and “Being” (*Dasein*). Through the term “primitive presence”, new phenomenology tries to illustrate that the man always experiences something with his own body “in a given time and place.”⁴⁰ In such a way, the uniqueness and non-substitutability of the bodily perception are highlighted. In the state of the primitive presence, “all the meanings are subjective”⁴¹. New phenomenology refers to such meanings as “subjective facts” (*subjektive Tatsachen*). In contrast with the objective facts which, as a synonym of neutral facts, could be explained by fast everyone,⁴² the subjective facts are possessed and described only by the perceiving individual.⁴³ According to new phenomenology, the subjective facts concern in the first place something that occurs automatically and spontaneously and thereby have a status prior to the objective facts.

The analysis of the primitive presence easily gives rise to the impression that the body perception seems to be purely biological and physiological and confined to a closed private area. If so, then it would be impossible to achieve the interaction between the inside and outside world and be consequently in contradiction to the previously mentioned thesis that the bodily communication prevails over the whole area of life. So in order to realize the interplay between self and foreign, there must be a common background to combine the communicative partners together. For this purpose, new phenomenology introduces the concept “common situation” (*gemeinsame Situation*). The common situation has a variety of forms. One of the most important of these is the socio-cultural framework at macro level which covers inherent components like families, traditional customs, behavior standards, ethical norms of a specific social class, cultures and languages of different nations, factors of civilization and enlightenment belonging to a larger cultural circle.⁴⁴ Another important form of the common situation is “personal situation” (*persönliche Situation*) which is considered as individual life process integrated with social elements.⁴⁵ Such personal situation is “partly retrospective (such as focal points from memory),”⁴⁶ “partly present (positions, expressions, attitudes, life skills, vocabulary, habitual interests etc.),”⁴⁷ and “partly sketchily prospective [...] (and) in intensive interaction with the retrospective factors.”⁴⁸ According to the new phenomenology, “sometimes the personal situation is inserted in the common situation, while sometimes is loosely connected with it in the form of scattered experience pieces.”⁴⁹

Thus, the body concerns two seemingly ambivalent relations: on the one hand, as a concentrated manifestation of human natural attributes, the body involves “the basic layer of the human existence,”⁵⁰ namely “the life originated from the primitive presence.”⁵¹ This means that it has congenital sensory system and even covers “all kinds of involuntary motor actions.”⁵² On the other, the body structure

is "not in a state of absolute seclusion,"⁵³ but exhibits a tendency to get rid of the primitive presence and "is susceptible to new things coming from the external world,"⁵⁴ which is described as "developed presence" (*entfaltete Gegenwart*). More specifically, the body is deeply rooted in diversified social contexts from the very beginning and transformed by certain cultural and technical means.

Therefore, there is no insurmountable barrier between the human natural and social qualities as usually thought. On the contrary, they mingle and amalgamate with each other. The seemingly transient and changeable individual perception patterns are in fact continually and profoundly influenced by the relatively stable structures and regulations of the society. It is not uncommon to encounter such a situation: some natural aesthetic experiences are not directly related to the bodily congenital attributes, but primarily to the socio-cultural aspects. Take respiration as an example again. In the case of air scarcity, short breath will make us keenly aware that we are breathing animals and thereby inseparable from the air. However, in some occasions hard respiration can result from a depressive or tense social atmosphere. In this aspect, body perception is no longer a feeling in the sense of pure biology, but has a close relationship with "the human psychic and social existence."⁵⁵ In addition, the dynamic association of the natural and social properties affects the aesthetic characteristics of the external nature as well. As shown by the above discussion, the natural phenomena known as quasi-objects can be experienced, only when the body is present. Besides the innate factors, the bodily experience contains also the elements from the "mechanism for the mutual acknowledgement and social expectations."⁵⁶ In such a case, nature is no longer a notion completely opposite to human civilization, but a certain cultural product which is shaped by the effects of human behavior, society and history, etc. As a matter of fact, "nature itself cannot be seen as a pure fact, but a diversity of possibilities which are developed through (socio-cultural) practices."⁵⁷ For instance, mountains had long been considered as abominable. Only until the 18th century were they classified first as sublime objects and thereafter as beautiful.⁵⁸ In this sense, the aesthetic perception of natural objects is sometimes so stable and universal that it even seems to have some features of substance.⁵⁹

Conclusion

New phenomenology defines the body as a basic form of human existence in the world. Proceeding from this premise, it re-examines the relationship between the outer and inner world of human beings in the contemporary context. In the course of the argumentation, it adheres to the organic and holistic approach and thus displays an ecological consciousness centering on symbiosis. From

the perspective of new phenomenology, we can conclude that on the one side, the human being as a kind of body being coexists with other natural objects in the same biosphere. On the other, the relationship between the human internal and external world shows the unity of diversity and universality and of variability and stability. In this regard, new phenomenology obviously has a huge significance in the reflection and correction of the over-emphasis of human rationality, spirit and will in the modern background which consequently led to a double alienation from nature, namely ruthlessly exploiting the environment and constantly depreciating the role of the body.

Of course, any theory is not perfect. The position of new phenomenology is not unassailable as well. One apparent defect is that its exploration of human nature and human relationship with environment is most of the time established on the basis of the body experience, which has largely excluded the role of rational judgment. As far as the construction of the eco-aesthetics is concerned, it's impossible to overlook the fact that only with "a reason-based delight in the existence of beautiful nature,"⁶⁰ people will be "interested in preserving such nature"⁶¹ and intend to use the sustainable means to achieve this goal.⁶² So in this case, it seems to be more reasonable and convincing if one doesn't ignore the significance of certain rational judgment while underlining the indispensability of perception's participation in the natural aesthetic experience.

Endnotes

1. Cf. G. Böhme, *Für eine ökologische Naturästhetik*, Frankfurt am Main: Suhrkamp Verlag, 1989, p. 9.
2. Ibid.
3. Cf. G. Böhme, *Die Phänomenologie von Hermann Schmitz als Phänomenologie der Natur?*, [in:] *Phänomenologie der Natur*, ed. G. Böhme, Frankfurt am Main: Suhrkamp, 1997, p. 146.
4. Ibid.
5. Cf. H. Schmitz, *Der Leib, der Raum und die Gefühle*, Ostfildern vor Stuttgart: Ed. Tertium, 1998, p. 7.
6. Cf. H. Schmitz, *Kurze Einführung in die Neue Phänomenologie*, Freiburg im Breisgau: Verlag Karl Alber, 2009, p. 76.
7. Ibid.
8. cf. H. Schmitz, *Der Leib, der Raum und die Gefühle*, Ostfildern vor Stuttgart: Ed. Tertium, 1998, p. 13.
9. Cf. H. Schmitz, *Kurze Einführung in die Neue Phänomenologie*, p. 77.
10. Cf. H. Schmitz, *Der Leib, der Raum und die Gefühle*, p. 16.

11. Ibid., p. 31.
12. Ibid., pp. 31, 33.
13. Cf. H. Schmitz, *Kurze Einführung in die Neue Phänomenologie*, p. 77.
14. Ibid., p. 39.
15. Ibid., p. 48.
16. Cf. G. Böhme, *Die Phänomenologie von Hermann Schmitz als Phänomenologie der Natur?*, p. 142.
17. Cf. G. Böhme, *Asthetik: Vorlesungen über Ästhetik als allgemeine Wahrnehmungslehre*, München: Wilhelm Fink Verlag, 2001, p. 62.
18. Ibid., pp. 61, 62.
19. Cf. G. Böhme, *Die Phänomenologie...*, p. 143.
20. Ibid.
21. Cf. H. Schmitz, *Kurze Einführung in die Neue Phänomenologie*, p. 45.
22. Cf. P. Thomas: *Leiblichkeit und eigene Natur. Naturphilosophische Aspekte der Leibphänomenologie*, [in:] *Phänomenologie der Natur*, ed. G. Böhme, Frankfurt am Main: Suhrkamp, 1997, p. 293.
23. Cf. G. Böhme, *Leibsein als Aufgabe: Leibphilosophie in pragmatischer Hinsicht*, Kusterdingen: Die Graue Edition, 2003, p. 63.
24. Ibid., p. 65.
25. Ibid., p. 70.
26. Ibid.
27. Cf. G. Böhme, *Asthetik: Vorlesungen...*, p. 15.
28. Cf. G. Böhme, *Für eine ökologische Naturästhetik*, p. 35.
29. L. Hanning, *Ökologische Ästhetik. Theoretische Kunstbetrachtung aus materialistisch-konstruktivistischer Sicht*, Würzburg: Verlag Königshausen & Neumann GmbH, 2007, p. 23.
30. Cf. G. Böhme, *Asthetik: Vorlesungen über Ästhetik als allgemeine Wahrnehmungslehre*, München: Wilhelm Fink Verlag, 2001, p. 61.
31. Ibid., p. 67.
32. Ibid., p. 85.
33. Cf. G. Böhme, *Für eine ökologische Naturästhetik*, p. 51.
34. W. Welsch, *Blickwechsel. Neue Wege der Ästhetik*, Stuttgart: Reclam Verlag, 2012, p. 325.
35. Ibid., p. 327.
36. Ibid., pp. 325–326.
37. Cf. G. Böhme, *Für eine ökologische Naturästhetik*, p. 51.
38. Cf. G. Böhme, *Die Phänomenologie...*, p. 142.
39. L. Hanning, *Ökologische Ästhetik...*, p. 162.
40. G. Böhme, *Leibsein als Aufgabe: Leibphilosophie in pragmatischer Hinsicht*, Kusterdingen: Die Graue Edition, 2003, p. 61.
41. H. Schmitz, *Kurze Einführung in die Neue Phänomenologie*, p. 101.
42. Ibid., p. 31.
43. Ibid., pp. 31, 32.

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44. Cf. H. Schmitz, *Höhlengänge: Über die gegenwärtige Aufgabe der Philosophie*, Berlin: Akademie Verlag, 1997, p. 89.
45. Cf. H. Schmitz, *Kurze Einführung in die Neue Phänomenologie*, p. 106.
46. *Ibid.*, p. 108.
47. *Ibid.*
48. *Ibid.*
49. *Ibid.*
50. *Ibid.*, p. 45.
51. *Ibid.*
52. *Ibid.*, p. 106.
53. *Ibid.*, p. 45.
54. *Ibid.*
55. G. Böhme, *Die Phänomenologie...*, p. 138.
56. G. Böhme, *Asthetik: Vorlesungen...*, p. 86.
57. Cf. G. Böhme, *Die Natur vor uns: Naturphilosophie in pragmatischer Hinsicht*, Kusterdingen: Die Graue Edition, 2002, p. 18.
58. Cf. W. Welsch, *Blickwechsel. Neue Wege der Ästhetik*, pp. 325–326.
59. Cf. G. Böhme, *Die Natur vor uns...*, p. 18.
60. S. Majetschak, *Intellectual Interest in "beautiful" nature: A Kantian Perspective for Eco-Aesthetics*. Presentation at the International Conference on "Constructive Post-modernism and Eco-Aesthetics" (June 13th –15th , 2012 Jinan, China).
61. *Ibid.*
62. *Ibid.*

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Environmentally Engaged Art/Science Collaboration and Aesthetic Appreciation of the Environment

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At the turn of the 1960s and 1970s, we can observe both in art and aesthetic theory increasing interest in topics on nature that has its origins in the growing force of environmental movements and in the strengthening of public concern about nature and environmental issues such as loss of biodiversity, pollution, climate changes and many others. Artists as well as aestheticians turned their attention to nature and began to focus on how to appreciate it correctly or how to make ecologically sensitive art. In some of their concepts natural sciences played an important role.

In this paper, I want to concentrate on intersections of art, aesthetics and science to show problems of cognitive approaches (with emphasis on Carlson’s) in environmental aesthetics. But let’s start with a short excursion to cognitive aesthetics. The cognitive branch of environmental aesthetics emerged as a reaction to the lack of appropriate aesthetic valuation of nature and came with a critique of established models of appreciation, focused on the domain of art. In some way its main goal was to bring objective parameters for aesthetic judgments of nature. Cognitivists use scientific knowledge as a predisposition of correct aesthetic appreciation of nature, considering it as an important part of thinking about natural relations. Carlson’s cognitive model of natural environment emphasizes this importance the most. According to him, aesthetic judgment of nature is not possible without scientific knowledge about this type of environment. As he says: “The natural environmental model holds that in the appropriate appreciation of nature the required information, justified belief, or

knowledge is that which is provided by natural sciences and their commonsense predecessors and analogues.”¹ Scientific information, notably from the fields of ecology, geology, zoology or botany, turns the aesthetic experience into more meaningful and deeper and shows the viewer *one* correct way of appreciating the object. In a different text he states: “Scientific information and redescription make us see beauty where we could not see it before, pattern and harmony instead of meaningless jumble.”²

This approach sets its attention on objects, scientific knowledge forms here our expectations on the natural objects and increase the level of our aesthetic pleasure while having the background of natural sciences. But limiting aesthetic experience only on the one based on scientific knowledge creates reductionism that may lie in Carlson’s and Parson’s aesthetic functionalism. According to Bannon, this promotes that nature’s beauty is the result of “[...] the functional fit of the various elements of a system in terms of their casual role.”³ In this way, everything that performs its function in nature is beautiful. This also leads to the acceptance of positivistic theory of all natural objects’ prior beauty, considering that natural sciences are those that would direct us to its recognition.⁴

A cognitive approach is also further developed by others – Malcolm Budd concretes that not every type of scientific knowledge is important in aesthetic valuation of nature and perceiver needs to select information which is necessary for his aesthetic experience.⁵ Also in this manner continues the already mentioned Glenn Parsons who reformulates the normative element in Carlson’s scientific cognitivism. He supposes that natural objects are dividable into many scientific categories that represent a broad scale of characteristics often impossible to define all, and some of them are not even necessary for aesthetic qualities of these natural objects. Parsons proposes to use only those categories which are the most suitable for aesthetic perception of the natural object, in his own words “[To] view the object under scientific categories in which it truly belongs and which maximize the aesthetic appeal of the object.”⁶ Even though both Parsons and Budd narrow the extent of scientific knowledge in aesthetic experience, it is still a crucial instrument of their nature’s valuation.

The positive aspect of cognitive approach is some level of objectivity that scientific data can guarantee so the appreciation is to some extent freed from the subjective preferences of the perceiver. This can lead to the perception of nature as the one of its own value and independence. On the other hand, there has been a serious discussion about the limitations and reductionism of cognitivist position among other environmental aestheticians, which I will leave aside.⁷ My aim is to look closer on how such an approach makes the dichotomy

between aesthetic appreciation of art and nature, and how environmentally engaged art/science collaboration can deny this dichotomy.

I want to concentrate on the image of nature those authors – intentionally or unintentionally – create, and how they separate it from other types of aesthetic experience. A good example might be the contrariety to art that cognitivists constitute; the comparison of their approach with practices of environmentally engaged art/science projects might bring a new light into this discussion.

First, let's have a look at how the cognitivists (Carlson in first place) use science to construct the opposition between aesthetic appreciation of art and nature. Carlson does so when he elaborates his well known concept of natural environment model. He suggests that for correct aesthetic judgment of nature, it is inappropriate to use the same way of appreciation as we have used in the aesthetic judgment of art. Adapting aesthetic models known in art might be misleading for the aesthetics of nature. Carlson names two art paradigms connected with traditional aesthetic appreciation of nature. The first is "object model" that focuses its aesthetic attention only on chosen objects, f.e. statues or still life. But, as he suggests, this approach can not be used in aesthetic valuation of nature, because natural objects are adherent to its environment and cannot be judged without this context. The second one Carlson calls the "landscape model" and is analogous with what is in art represented in landscape painting. What is aesthetically appreciated here is a natural segment or prospect. This view might reduce natural environment to two-dimensional scene and inspire us to appreciate it as landscape painting – from specific point of view and with adequate distance.⁸ Carlson condemns those two models and proposes a third one, "natural environment model", that does not result from the tradition of art, but rather uses scientific knowledge for appropriate aesthetic appreciation. This knowledge substitutes the knowledge of art history which we need for correct valuation of artworks.

What is important considering Carlson's new model is how narrow his concept of natural environment is and that it does not only exclude art, but also eliminates the most common environments – semi-natural or agricultural ones, and thereby the only environments we can aesthetically judge are those purely natural. Budd supports this definition and proposes an even sharper distinction – we can aesthetically appreciate only nature as nature, natural objects are those that stand in the contradiction to man-made objects, i.e. artifacts. We have to value them separately even if they are situated in so-called "mixed" environments.

Budd writes:

All that follows from the fact that much of our natural environment displays the influence of humanity and that we are usually confronted by scenes that in various ways involve artifice is that the aesthetic appreciation of nature, if it is to be pure, must abstract from any design imposed on nature, especially a design imposed for artistic or aesthetic effect.⁹

I argue that this dichotomy between natural and artificial is to some extent given by the definition of instrument of aesthetic appreciation, that is scientific knowledge, because it defines the set of objects and environments that can/should be explored. But is this opposition in aesthetic appreciation of art and nature, or artificial and natural, acceptable? Does it not bring more negatives than positives?

Let's search in the intersection of these two zones which in my opinion well represents environmentally engaged art/science collaboration. It challenges Carlson's object and landscape model because it consists of completely different type of aesthetic experience.

By environmentally engaged art I understand art practices which put in the first place environmental dimension of art projects. Their aim is not to improve natural environments with artwork, but rather to return aesthetic quality of damaged nature back, or to protect it.¹⁰ We can observe a shift from the object-based art to its more conceptual forms, where considering the environmental improvement is substantial for artistic creativity. Art theorist Suzi Gablik describes this type of art as practice based on active engagement in solving social and environmental problems, the consequences of today's society in crisis. According to her, artists should accent interconnection of the universe and help to create moral values that would integrate ecology, social relations and Earth stewardship.¹¹ Her concept of art's "ecological imperative" leads to the protective dimensions of artistic practices that can help nature and people to recollect their belongingness to natural environments.¹²

If environmentally engaged art is primarily an artistic effort to protect nature or to improve harmed environment, then scientific knowledge has to serve as an informative apparatus about the chosen area. For environmentally sensitive projects, artists work with scientific data to understand ecological functions of the site, or they choose direct cooperation with naturalists who can rectify their purpose.¹³ The role of science here is to demarcate the borders of artist's creative freedom, depict lines between morally and ecologically acceptable or unacceptable. Artists Helen Mayer Harrison and Newton Harrison, for example, use in their projects cooperation with scientists and public as a basic tool for their art work. In *Sava River Project* (1989–1990) they proposed a nature corridor to protect the Balkan river Sava. They worked with local communities consist-

ing of environmental activists, ecologists and water department, and created a complex project with detailed information about ecological significance, that was accepted by the authorities.

Swiss artist Georg Steinmann released between 1996 and 2007 a project called *Komi: A Growing Sculpture* with an aim to create a transdisciplinary network that would try to preserve wilderness in the Russian region of Komi. This ecologically precious area is under permanent threat of ecological degradation, because of its rich mineral resources. Steinmann created a platform, where foresters, ecologists, urbanists and local citizens could discuss the possibilities for environmental protection as well as educate one another and share the different perspectives on surrounding natural environments.

A different approach is chosen by Lynne Hull. She calls her projects “ecoatements”, participating in habitat restoration as atonement for the damage people have done to the environment, and situates them in ecologically harmed areas. She places sculptures that serve as home for wild animals. Mostly from natural materials such as wood or stones, they are at the same time refuges, breeding places or resources of food and water. To achieve a successful result, Hull has to learn about the habitat, way of life, abilities and ecology of present species. The starting point for her artworks is then a sort of scientific research in which she frames her projects. In connection with using scientific knowledge she says: “Research and consultations are essential to project success. I prefer direct collaboration with wildlife specialists, environmental interpreters, landscape architects and local people for design integration.”¹⁴

Art and science collaboration in those projects originates from the moral demands of authors who consider the holistic perspective of the relationship between people and nature and the need for environmental care as crucial. Artists accept intrinsic value of nature that they understand as superior to value of art. As the Harrisons declare:

Our work begins when we perceive an anomaly in the environment that is the result of opposing beliefs and contradictory metaphors [...] For us, everything started with our decision [...] to deal exclusively with issues of survival as best as we could perceive them.¹⁵

With this point is also connected aesthetic dimension of art projects – the artists’ aim is not to show the beauty of art in nature, but to emphasize the beauty of nature itself. This fragile connection between art and nature is described by Heike Strelow as ecological aesthetics, and she emphasizes that “[n]ature is the beginning and the end of culture, the one is inherent in the other.”¹⁶ Aesthetics of environmentally engaged art should depict this close connection between cul-

tural and natural worlds and emphasize the importance of natural systems. The ethic, aesthetic and ecological aspects of such an artwork fade one into another.

Environmentally engaged art results from the new tendencies in the 20th century art that are based on conceptual strategies, transdisciplinary collaboration and moral demands posed on artists – in this case the ethics of author's intentions towards nature. The purpose of art is to divert from art objects to natural objects, and the process of art's creation is as important as final art itself. Often, thanks to an artist's aim, environments harmed by people become natural again, or natural environments remain natural. Co-directors of *Nine Mile Run Greenway Project* (1997–2000) Tim Collins, Reiko Goto and Bob Bingham transformed industrial waste site to a sustainable public green space. The goal of transdisciplinary platform AMD&ART is to, with a help of volunteers, reclaim the old minelands and return the lost biodiversity, too. We have here the environments, where an artist comes in and leaves them in an ecologically better condition than they were before.¹⁷

How shall we aesthetically appreciate those transformed environments? Are they considered to be human-made or natural? I believe that one of the artist's intentions is to dispel the distinction between natural and artistic by unifying art and nature, or dematerializing art to focus on conservation or revitalization projects; and to obtain this, they use scientific knowledge. The purpose is the same as in Carlson's case – scientific knowledge serves here as a basis for informational apparatus of nature, which is both in environmentally engaged art and in cognitive environmental aesthetics tightly connected with the aesthetic perception of nature. See how similarly, but even so from the different perspectives, incorporates scientific knowledge to their concepts Carlson and one of the environmentally engaged artists, Patricia Johanson. Carlson writes: “[T]his [scientific] knowledge gives us the appropriate foci of aesthetic significance and the appropriate boundaries of the setting so that our experience becomes one of aesthetic appreciation.”¹⁸ Johanson describes how she proceeded when she planned her art/restoration project:

I began to do research on what different animals eat, because I knew that the right plants would attract wildlife. The project evolved from many different perspectives at once. I knew that the structures had to not only solve a host of environmental problems, but also had to be acceptable to scientists, engineers and city planners.¹⁹

Both of them use scientific knowledge as a source of correct comprehension of nature, and for both natural or closely natural environment is the most valuable. The parallel between those two attitudes towards nature can be found also in stressing the idea that nature is essentially beautiful. For cognitivists, it

is important to educate the perceiver how to fully comprehend this beauty, and for environmentally engaged artists it is important to point this beauty out. As the artists themselves declare in some of the interviews – for example Harrison about *Sava River Project*:

The nature reserve existed as a many hundred sq. km. floodplain and the best of its type remaining in the part of Europe with endangered species and an ancient farming community by an endangered wetland oak forest in oak pin frame homes, a miraculous place. We felt that such a reserve would find its uniqueness under attack from the effluent of the surrounding industrial farming.²⁰

Another artist, Patricia Johanson, writes about her revitalization art projects: “The art project affords people access to [...] environment, so they find out how wonderful [such a place as] swamp really is.”²¹ And at last, Lynne Hull:

I start with the parameters of what science thinks a species needs, and design aesthetics around it. The degree the aesthetics are for humans balance with what I imagine are aesthetics for other species and that changes on a site-specific basis.²²

Through their art projects, environmentally engaged artists also try to show that for aesthetic appreciation of environment not only boundaries between art and nature are very subtle, but that it is also difficult to differentiate between natural and human environments as distinguished by cognitivists. A landfill transformed into a meadow, cleaned river or more sustainable forest can be result of artistic, activist or natural processes, and environments can in the course of time metamorphose from one type to another. It is rare to find pure natural environments as are described by Carlson or Budd, that is why it is difficult to use the type of aesthetic appreciation of nature that they have developed. From this point of view, reduction of knowledge only on the scientific one can be limiting in what we want to judge aesthetically. Samantha Clark also noticed this fact :

Carlson’s highly objective, scientific environmental aesthetic would tend to exclude not only art but the built environment, the managed ‘semi-natural’ environment, and the social environment, which in reality are the environments most of us encounter on a daily basis. It would seem therefore that one set of limitations has been replaced with another.²³

In virtue of Carlson’s scientific objectivism, natural environments are defined as those of unspoiled nature, the environment that we rarely come in contact with.

When Carlson talks about aesthetic appreciation of other types of environment, f.e. agricultural or human, he proposes other methods of valuation. Dealing with human environments, Carlson stresses the relationships that exist between

human environments and people surrounded by this environment.²⁴ When appreciating the agricultural environments, he emphasizes not only its ecological and functional relevance, but also social context of creation of these agricultural areas.²⁵ The reason why he leaves those elements of appreciation when talking about natural environments might be the reduction of their aesthetic appreciation purely on that one based on scientific knowledge and the inferential dichotomy of appreciation of art and nature. What should be considered here, and, I believe, environmentally engaged art shows, is that no environment should be left without its social and historical context. Most of the natural environments were influenced by the human intervention, we can see social interactions or politics behind most of them. Even if we decide to aesthetically appreciate truly wild and remote areas as natural parks, we should ask why they are left remote, untouched by humans. This can reveal human decisions and preferences hidden behind this remoteness, that also should not stand aside when considering its aesthetic qualities. Environmentally engaged art that incorporates public and scientists into its art projects creates social contexts behind the environments they transform, too. These contexts are also relevant if we want to correctly aesthetically appreciate sites that oscillate somewhere between art and nature, artificial and natural. Scientific knowledge should be just one of the methods that bring us closer to the aesthetic understanding of our environment. But it should not be delimiting in *what* we choose for our appreciation.

Endnotes

1. A. Carlson, *Nature, Aesthetic Appreciation and Knowledge*, „The Journal of Aesthetics and Art Criticism“, vol. 53, 1995, pp. 393–400, 398.
2. A. Carlson, *Aesthetics and the Environment: The Appreciation of Nature, Art and Architecture*, London: Routledge, 2000, p. 87.
3. B.E. Bannon, *Re-Envisioning the Nature: The Role of Aesthetics in Environmental Ethics*, „Environmental Ethics“, vol. 33, 2012, pp. 415–436, 418.
4. A. Carlson, *Nature and Positive Aesthetics*, „Environmental Ethics“, vol. 6, 1984, pp. 5–34.
5. See M. Budd, *The Aesthetic Appreciation of Nature*, „British Journal of Aesthetics“, vol. 36, 1996, pp. 207–218.
6. G. Parsons, *Nature Appreciation, Science, and Positive Aesthetics*, „British Journal of Aesthetics“, vol. 42, 2002, pp. 279–295, 292.
7. For critical responses see f.e. E. Brady, *Aesthetics of the Natural Environment*, Edinburgh: Edinburgh University Press, 2003; or S. Godlovich, *Evaluating Nature Aesthetically*, „The Journal of Aesthetics and Art Criticism“, vol. 56, 1998, pp. 113–125.

8. For more detailed look see A. Carlson, *Appreciation and Natural Environment*, “The Journal of Aesthetics and Art Criticism”, vol. 37, 1979, pp. 267–276.
9. M. Budd, *The Aesthetic Appreciation of Nature*, pp. 207–218, 211.
10. This is the biggest difference between land art, environmental art and environmentally engaged art. Both land art and environmental art (and to some extent also eco-art, which definitions vary and can be understood as part of environmentally engaged art as well as of environmental art) – even in different intensity – use nature as background of their artworks which are dominant over natural environment.
11. See S. Gablik, *Alternative Aesthetics*, “Landscape & Art”, 2003, <http://www.landviews.org/la2003/alternative-sg.html>, access: October 14th, 2014. In this context, Gablik talks about relational aesthetics that would shift away from individualism to interconnected bond of animate and inanimate nature.
12. S. Gablik, *The Ecological Imperative*, “Art Journal”, vol. 52, 1992, pp. 49–51.
13. In this paper, I will focus only on question how artists are using the science in their art and what are the benefits of this collaboration. Nonetheless, it is also good to mention that not only science can be useful for art, but also art can be useful for science. See f.e. S. Wilson, *Information Arts. Intersections of Art, Science, and Technology*, London: The MIT Press, 2002. I will also leave aside the debate about the positives and negatives of scientific dominance in environmentally engaged art that is often held among artists. For further discussion see S. Gablik, *Connective Aesthetics: Art after Individualism*, [in:] *Mapping the Terrain: New Genre Public Art*, ed. S. Lacy, San Francisco: Bay Press, 1995; or J. Erzen, *Ecology, Art, Ecological Aesthetics*, [in:] *Ecological Aesthetics: Art in Environmental Design: Theory and Praxis*, eds. H. Strelow and H. Prigann, Basel: Birkhäuser Architecture, 2004.
14. L. Hull, *Artist Statement*, 2003, http://greenmuseum.org/content/artist_content/ct_id-188__artist_id-7.html, access: October 14th, 2014.
15. H. Mayer Harrison and N. Harrison, *Shifting Positions toward the Earth: Art and Environmental Awareness*, [in:] *Women, Art & Technology*, ed. J. Malloy, Cambridge: Massachusetts University of Technology, 2003, pp. 160–179, 161.
16. H. Strelow, *A Dialogue with Ongoing Process*, [in:] *Ecological Aesthetics: Art in Environmental Design: Theory and Praxis*, eds. H. Strelow and H. Prigann, Basel: Birkhäuser Architecture, 2004, pp. 10–15, 12.
17. As an example of some other restoration artists might serve Aviva Rahmani, Buster Simpson or Patricia Johanson.
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19. P. Johanson, *Art and Survival: Creative Solutions to Environmental Problems*, 1992, <http://patricijohanson.com/fairpark/>, access: October 14th, 2014.
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21. P. Johanson, *Art and Survival...*
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23. S. Clark, *Contemporary Art and Environmental Aesthetics*, “Environmental Values”, vol. 19, 2010, pp. 351–371, 356.
24. A. Carlson, *On Aesthetic Appreciation Human Environments*, “Philosophy & Geography”, vol. 1, 2001, pp. 9–24.
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Art, Aesthetic Value, and Beauty: On the Evolutionary Foundations of “Narrative Resemblance Concepts”

1. The emergence of an aesthetic discourse

What does the word “art” mean and how is this concept related to e.g. “beauty” or “aesthetic value”? These are some of the most central questions which have preoccupied philosophers and aestheticians since at least ancient Greece, attempting to elucidate the nature of these concepts, though often in a perfunctory manner. It has frequently been maintained, however, that the 18th century brought some significant changes to the Western aesthetic discourse, or even, to be more exact, gave birth to aesthetics as a separate discipline, a more “unified philosophy of art and beauty”, as envisaged by scholars such as Alexander Gottlieb Baumgarten, Immanuel Kant, and Francis Hutcheson.¹ While some fundamental (and still persistent) ideas and notions may be traced back to Antiquity, other central aesthetic concepts such as “beauty” or “art” undergo quite radical alterations. “Art”, understood as a broad concept including the crafts and sciences assumes a more precise shape and develops into the modern system of the “fine arts” (or “beaux arts”).

Now, it is certainly questionable whether any art-specific considerations were discussed or had any explicit significance for the production of cultural artifacts in the West before the 5th century B.C.E. during the Paleolithic and Neolithic periods mainly pragmatic and magical-religious interests seem to have been the motivating factors for any cultural production. In ancient Egypt, for instance, the economic value of used metals and other materials, the everlastingness of buildings and other objects, and religious or political concerns appear to have played a far more important role than what from our perspective would count as explicit aesthetic purposes. Of course, this does not necessarily mean that aesthetic intentions had no importance at all or did not exist. Despite the fact that we have no knowledge of an art-specific discourse or terminology, the cultural

production in, say, Egypt may nevertheless have been influenced by aesthetic considerations, i.e. by efforts to give their products qualities which – according to present standards – works of art may also possess.

In Greece, however, a different awareness of functional or inherent properties distinguishing paintings, sculptures or dramatic performances from other objects or activities seems to have emerged during the Classical period (c. 480–323 B.C.E.). Admittedly, in texts from this period no concept of art is used that exclusively denotes the “fine arts”, nor were clear-cut theories of art elaborated. Moreover, the ancient Greek term for art, *technê*, has a broader extension than our modern use of the term, referring to any rational production or activity based on teachable rules, and could perhaps be translated as “organized knowledge and procedure applied for the purpose of producing a specific preconceived result.”² This means that art was supposed to include the fine arts (i.e. sculpture, painting, music, poetry and perhaps architecture) as well as the crafts and sciences. Furthermore, pre-Hellenistic writers such as Plato and Aristotle were rather interested in clarifying the concept of image (or *mimesis*), not of art *per se*.

We should note, however, that most attempts to demarcate classical from modern aesthetics appear in several respects to presuppose or imply significant connections. First, ancient and modern theories are assumed to be at least partially coreferential, that is, some of the concepts used are seen as referring to the same types of objects or activities. Second, for many centuries certain texts from Antiquity have *de facto* been used and interpreted as theories of art, and their influence on modern aesthetics can hardly be denied. Third, a common trait in those ancient texts that deal with objects or activities such as dance, theatre, music, painting and sculpture is the stress on their imitative or mimetic function. Although being mimetic is neither a necessary nor a sufficient condition for something to be a work of art (antique or modern), numerous artworks have actually been created with the intention of imitating or representing something, and they have been used and evaluated accordingly.

2. Analytic aesthetics and the concept of art

Indeed, one of the historically most persistent views on art, the function and value of artworks consist of their capacity to “imitate or represent” (i.e. having a relation in which it is said to be “of”) something else. However, this idea – or rather cluster of ideas – is far more complex and multifaceted than many contemporary debates concerning e.g. pictorial representation reveal, tending to focus upon something like straightforward copy theories, which unfortunately often have received something like paradigmatic status. Pictorial mimesis as such

does not necessarily involve the depiction (or visual “imitation”) of particulars or of real-world objects or subjects. Throughout history, pictorial works of art have quite regularly been created in order to represent fictional, ideal, or typical entities. That is, imitation in a wide sense might also be conceived as the rendering of universals, abstractions, essences, or types, and imitation theories may also describe – or prescribe – imitative representation as rendering certain idealizations (e.g. in terms of morality or beauty).³ Apart from innumerable examples in the history of art where not the exact and literal imitation of reality seems to have been intended, modern developments from the 19th century onwards have further made such theories untenable.

An alternative attempt to define art has been to focus upon its emotional properties or its “expressiveness”. Also such expression theories of art might in some sense be regarded as mimetic, i.e. by stressing the representation of emotional properties in works of art (such as gaiety, melancholy, aggressiveness, or serenity) and/or emotional states attributed to the artist (e.g. at the moment of creation, or his usual state of mind). Even these attempts have for various reasons faced serious difficulties, not least because numerous counter-examples could be mentioned where acknowledged works of art seem to have no expressive properties at all, or where the manifestation or elicitation of emotional states are not artworks (such as a smile or hitting someone).

Now, confronted with these problems, a number of scholars have come to suggest that attempts to find distinctive “functional or institutional constituents” of art might be more promising, rather than focusing upon (straightforward) perceptual or semantic features.⁴ According to, for example, Monroe C. Beardsley, a work of art is an object which belongs to a certain function-class and is dispositionally efficient for fulfilling a certain desirable aesthetic function (which here is supposed to be the capacity to provide aesthetic experiences or aesthetic enjoyment).⁵ However, it might very well be doubted whether a distinct aesthetic quality (having context-free, ahistorical, and cross-cultural stability) can be attributed to certain experiences or states of enjoyment, which has been pointed out by a number of philosophers, such as George Dickie.⁶ Thus Dickie elaborated an institutional or procedural definition of art according to which an object is conferred the status of candidate for appreciation as a work of art by representatives of the so-called “artworld.”⁷ Thus, briefly put, a work of art (in a classificatory sense) is (i) an artifact upon which (ii) some person or persons acting on behalf of a certain social institution (the artworld) has conferred the status of candidate for appreciation. Now, apart from the charge of circularity brought against this definition (the crucial notions “artworld” and “art” seem to be logically and semantically interdependent), the lack of criteria, or accounts

of what features artworld members rely on when conferring the status of being “art” on something has been regarded as a serious deficiency (as such decisions then seem to be quite arbitrary).⁸

All these attempts, then, to define “art” in essentialist terms by referring to distinctive, common and all-embracing perceptual, functional or procedural factors which members of this category are supposed to possess are quite obviously more or less unconvincing. Moreover, if we consider some twentieth-century movements in art (such as Dada, conceptual art, minimalism, ready-mades, happenings, Land art, and so forth), it seems that the proposals outlined earlier have become even more problematic. Indeed, we have no reason to assume that this category will not expand even further in the future.

Similar lines of thought have been put forward by a number of scholars theorizing about the arts. Weitz, one of the first and most widely cited proponents of an anti-essentialist position concerning the concept of art (others are, for instance, William Kennick, Haig Khatchadourian, Wladyslaw Tatarkiewicz, and Paul Ziff), regards past attempts to define art as rather evaluative and stipulative than just descriptive and classificatory.⁹ According to Weitz, there is no pervasive property shared by all objects which we are inclined to call art, and, moreover, that any attempt to specify such a property would foreclose on future creativity. The history of art is a history of a more or less radical creativity which has challenged, altered and departed from pre-existing concepts of art. Thus art ought to be thought of as an open concept without necessary and sufficient conditions for its application. Inspired by Ludwig Wittgenstein’s remarks concerning the nature of games and other open concepts, he claims that the concept of art is comparable to those, thus being like a family whose members resemble each other in some, but not in all, commonly shared respects. These complicated networks of similarities constituting the class of artworks are, borrowing a Wittgensteinian term, called “family resemblance”.

This line of reasoning – and narrative outline of an aesthetic debate as here presented– is of course quite familiar to those who are acquainted with the analytic aesthetic tradition prevailing among Anglo-American scholars. In the next section, I would like to discuss an interesting proposal put forward by Noël Carroll, focusing upon the narrative aspects of the concept of art, which in itself could be regarded as part of and continuation of a (meta-) narrative of aesthetics.

3. Noël Carroll on narrative connections

Now, referring to this discourse, Carroll argues that art indeed seems to have a necessary or core condition for its existence, namely its historical dimension

with regard to its production as well as to its reception and evaluation.¹⁰ The reception of art on part of the audience, for example, is guided by traditions of interpreting and appreciating art. Such traditions or the knowledge of historical antecedents provide means for orientation towards contemporary art. Historically preceding art activities and present ones have, as Carroll further claims, a “narrative connection”. Now, a narrative can be characterized as the representation of at least two (real or fictive) actions, events, or situations with a temporal link on the content side (i.e. concerning the represented world).¹¹ Quite frequently, a narrative seems to consist of a beginning (or an equilibrium), a middle (possibly with a disturbance or disequilibrium) and an end or closure. When it comes to historical narratives, the same structure appears likewise frequently to occur, though, in contrast to fictional narratives, the reported sequences of events and states of affairs are claimed (or presupposed) to be true or at least accurate.¹² The incorporated events are usually situated within an explanatory pattern which gives them significance by delineating their causal roles and teleological contributions to certain goals or outcomes. Art historical narratives show, according to Carroll, a similar pattern. Some of such historical narratives function as “identifying” narratives, that is, they are used to establish the art status of contested or disputed works.¹³

Thus the beginning of these narratives includes a description of a set of historical circumstances, of previous art practices, which are generally undisputed with regard to their art status. This background thus introduces a context which is adequate or sufficient for making the further development plausible and narratively intelligible. Artists or art schools can simply decide to adhere to such traditions; in that case the produced objects would count as mere *repetitions*, although not exact duplications, of previous artworks with regard to genre conventions, formal styles, themes, and so on. Examples of artistic movements which are indeed characterized by a high degree of (programmatic or stylistic) repetitive patterns are, for example, Greek classicism or Romanesque art.

But artists may also decide to modify existing artistic means and subjects. These deviations or “amplifications”, as Carroll calls them, seem especially to occur when preexisting art is regarded as problematic or obsolete, in one way or the other, and the artists attempts to solve this problem (or problems) by introducing new themes or techniques, for example regarding the rendering of light, space, ontological/metaphysical concepts, and so on, or even radically dismiss earlier traditions. We should keep in mind, however, that such works are not completely alien to or incommensurable with earlier traditions. Actually, far from being made in a radical aesthetic vacuum, they are created as a response to and as a conscious negation of prevailing art practices. The artists in question are

usually very well aware of the historical background, they have a conventional training and education, and they are, e.g. by means of social and economic networks, linked to established art institutions. The very production and existence of their works is thus dependent on a wider aesthetic context, and within this context identifying narratives are of crucial importance. Their role is to establish a link between more or less controversial works to intelligible and recognizable preceding art making practices; they function as arguments or explanations making use of supporting historical evidence (thus epistemic criteria of truth or plausibility play a vital role) presenting the artworks under debate as some kind of conclusion. For example, Clive Bell and Clement Greenberg presented historical identifying narratives in defense of modernist avant-garde art, arguing that earlier works of art with representational aspirations had reached a deadlock which only could be overcome by adhering to art's formal, non-representational aspects. We might certainly also take historically more remote cases into consideration, where similar identifying narratives seem to have been at work. Giorgio Vasari (1511–74), for example, in his book *The Lives of the Artists* (1550/1568), outlines a historical narrative beginning with artistic practices from the early Renaissance, or late Middle Ages (though with a glance backwards to Antiquity and the early Middle Ages), with representative artists such as Duccio or Giotto, culminating with the works by Raphael or Michelangelo. Another example that could be mentioned is Johann Joachim Winckelmann's (1717–1768) *The History of the Art of Antiquity* (first published in 1764) who argued that Greek art should be considered as an indisputable aesthetic ideal to strive for, with its love of the good, the beautiful and the true, or – as he put it – with its “noble simplicity and calm grandeur”. Basically, Baroque and Rococo art is seen as a tradition in decline, having reached a deadlock, while the purer classicism, represented by Jacques-Louis David, Antonio Canova and Anton Raphael Mengs, is supposed to be a radical revival of a true classic ideal.¹⁴

4. When and why did it all begin?

Carroll's proposal is certainly worth considering and indeed compatible with certain practices within art history and art criticism. Furthermore, it avoids many of the pitfalls that traditional essentialist definitions have suffered from, for example the charge of circularity brought against Dickie's institutional theory of art. As Carroll puts it, “circularity is a real defect in real definitions, and the narrative approach to identifying art does not entail definitions. Narratives are not definitions.”¹⁵ Still, this line of reasoning necessitates the existence of prior-established works of art in order to shed light on succeeding art discourses and

practices. And we might still reasonably ask how and for which reasons (or causes) these discourses and practices emerged in the first place. Most aesthetic theories have more or less considered (or been influenced by) existing artistic practices or objects, historically significant aesthetic theories, and experts' and other people's beliefs or language uses concerning aesthetic theories or concepts. Put in another way, they have (at least implicitly) taken empirical data into account.

However, a deficiency of numerous aesthetic theories consists of the rather narrow and somewhat arbitrary selection of empirical data considered to be relevant. Sociological, historical, art historical, psychological, neurophysiological, anthropological, or other "empirical" studies have to a regrettable extent been somewhat neglected.¹⁶ Most notably, analytic aesthetics has been described as a second-order discipline, a "philosophy of criticism" (as conceived by Beardsley), which is rather preoccupied with the language used by art critics or art historians than directly with works of art themselves. As for aesthetics, and philosophy in general, we may further doubt whether its scholars have given sufficient attention to the historicity of its traditional issues and concepts. In this respect, then, Carroll's proposal certainly opens for a historically more dynamic approach towards aesthetic theorizing. But, once again, when and why did it all begin? Are there any proto-aesthetic activities or discourses which could fruitfully be taken into account and which successively seem to have evolved into more fine-grained, specific aesthetic theories? These are still open questions and certainly worth investigating in order to gain a deeper understanding of the nature of aesthetic activities (and their accompanying narratives). Despite the inconclusiveness of essentialist definitions of art outlined earlier, generations of scholars and artists have nevertheless taken them very seriously, and they certainly still point to some crucial aspects which disjunctively or conjunctively have participated in establishing the category "art". Indeed, these definitions are not unreasonable at all (although they do not provide strict necessary and sufficient conditions), but hint at some characteristics which at least from a common sense point of view are associated with the core of art. Thus imitation and expression (in all the senses indicated), functional efficiency with regard to states of enjoyment, institutional sanctions, and so on are factors which significantly have contributed to the demarcation – as well as (together with other characteristics, not least narrative connections in Carroll's sense) to the extension – of this category.

First, as to the "imitative" functionality of certain artifacts, already Aristotle claimed in *Poetics* that the recognition of likenesses is a cognitive activity which gives humans enjoyment; it is natural for human beings to feel pleasure when encountering mimetic representations (due to the fact that all cognitive activities are supposed to be pleasurable).¹⁷

Interestingly in this context, according to the cognitive psychologist Merlin Donald's view on the development of human symbolic capacity through culture, mimesis is a cognitive capacity quite unique to humans which has evolved in *Homo sapiens* over the past 2 million years.¹⁸ A turning point arose when humans became able to function as symbolic and cultural beings, presupposing "mimetic skills" required to rehearse and refine the body's movements in a systematic way, to remember those movements, and to reproduce them at will. At a subsequent stage, *Homo erectus* integrated and reconceptualized events to create various prelinguistic symbolic traditions such as rituals, dance, and craft. This stage was then superseded by mythic-narrative cultures which arose as a result of the acquisition of speech and the invention of symbols, which was a major cognitive breakthrough for the externalization and spreading of memory. Also present in mythic culture, though, as Donald claims, appearing much later than speech, are symbolic and mimetic pictures like those found in southern European caves. Donald argues that these hunting and fertility images were used "to explore and develop the mythic ideas that were already the governing cognitive constructs of human society."¹⁹ In accordance with this proposal, it seems quite likely that humans at an early evolutionary stage must have developed and sustained a deep-rooted interest in various forms of preservable, mimetic representationality.²⁰ And here we might find some of the evolutionary roots and causes for more full-fledged aesthetic theories that emerged in ancient Greece.

Ellen Dissanayake's work, which has focused on the anthropological exploration of art and culture, might likewise give us some clues as to the first beginnings of aesthetic behavior, which is basically defined as "making something special"; that is, art making involves taking something out of its everyday use and context and making it somehow special.²¹ The emphasis is hereby thus put on the activity of demarcating objects or actions from everyday environments or circumstances ("artification") rather than on the resultant artifacts in themselves. The arts are not simply significant qua (static) packages of perceptual stimuli, characterized by beauty, originality or (evolutionary seen) by adaptive features related to e.g. healthy mates, nutritious food, resolved conflict. Instead, the operations/manipulations of stimuli are also important, and that these signals are made salient, given prominence or emphasis. Further, this gives rise to emotional responses when there are discrepancies or changes, provoking an interest. Artists in all media, so she claims, simplify, formalize, exaggerate, elaborate ordinary materials, body movements, tones, beats etc. – thus sustaining emotional interest. In her approach, Dissanayake has focused upon proto-aesthetic, prelinguistic, and affective communicative mechanisms in early mother-infant interaction as

well as their adaptive consequences during human evolution. General adaptive advantages of artification, phylogenetically as well as ontogenetically, involve e.g. the reinforcement of social bonds as well as neurophysiological, emotional, and social coordination.²² Artification, so Dissanayake claims, is a universal behavioral disposition whose components are ancient and influential features of human cognition and as important to human evolution as tool making, speech, the making/use of symbols.

Now, these approaches would certainly deserve a fuller discussion, which the available space here unfortunately does not permit.²³ Still, as I would like to suggest, the story of aesthetics and art could and should be considered on a much earlier stage than Carroll so far has outlined. By studying humans' very early evolutionary significant adaptive processes and preferences, we might trace the emergence and the foundations of concepts such as beauty (e.g. understood in terms of harmony, symmetry, measure, and order), expression and mimesis. Perhaps art indeed is indeed peculiar in that sense that narrative links in Carroll's sense seem to have played a particularly crucial role in its formation. However, I believe, this does not mean that anything goes. And we might still reasonably ask how the (historically) very first works of art (and proto-aesthetic artifacts or activities) did come into being. Beardsley once criticized Arthur C. Danto's proposal according to which theories of art are necessary for constituting works of art:

Arthur Danto must be mistaken in his well-known view that it is theories that make art "possible." Danto says, "It would, I should think, never have occurred to the painters of Lascaux that they were producing art on those walls. Not unless there were neolithic aestheticians." Perhaps so; but it does not follow that they were not producing art. An art theory may make the concept of art possible, but that's not the same as making art possible. Unless there were neolithic microbiologists, it would not have occurred to the cave dwellers that their illnesses were caused by micro-organisms; nevertheless they died from them.²⁴

Perhaps Beardsley's analogy is a little bit misplaced, a more appropriate comparison could rather be made between linguistics and its relationship to language and (proto-) linguistic behavior. But Beardsley's remark still has a point, I think. The existence of aesthetic and proto-aesthetic activities does certainly not presuppose a full-fledged aesthetic discourse. As to Carroll's narrative on the narrative connections within aesthetic discourse, its prologue still waits for being elaborated in more detail.

Endnotes

1. Cf. e.g. M.C. Beardsley, *Aesthetics from Classical Greece to the Present: A Short History*, Alabama: University of Alabama Press, [1966] 1985, p. 156 ff.
2. Cf. J.J. Pollitt, *The Ancient View of Greek Art: Criticism, History, and Terminology*, New Haven/London: Yale University Press, 1974, p. 10.
3. Cf. M. Ranta, *Mimesis as the Representation of Types. The Historical and Psychological Basis of an Aesthetic Idea*, Stockholm: Stockholm University, 2000, pp. 41–43.
4. See e.g. S. Davies, *Definitions of Art*, Ithaca/London: Cornell University Press, 1991, for an account and discussion of such attempts.
5. M.C. Beardsley, *Aesthetics – Problems in the Philosophy of Criticism*, Indianapolis: Hackett Publishing Company, [1958] 1981, pp. 524–532; Beardsley, *The Aesthetic Point of View*, ed. M. Wreen and D. Callen, Ithaca/London: Cornell University Press, 1982, pp. 298–315.
6. G. Dickie, *Beardsley's Phantom Aesthetic Experience*, “The Journal of Philosophy”, 62, 1965, pp. 129–36; G. Dickie, *Art and the Aesthetic. An Institutional Analysis*, Ithaca/London: Cornell University Press, 1974; S. Davies, *Definitions of Art*, pp. 62–64.
7. See e.g. G. Dickie, *Art and the Aesthetic*; G. Dickie, *The Art Circle. A Theory of Art*, New York: Haven, 1984.
8. Cf. S. Davies, *Definitions of Art*, pp. 109–114.
9. M. Weitz, *The Role of Theory in Aesthetics*, [in:] *Problems in Aesthetics. An Introductory Book of Reading*, ed. M. Weitz, New York: The Macmillan Company, 1959, pp. 145–156; W.E. Kennick, *Does Traditional Aesthetics Rest on a Mistake?*, “Mind” 67, 1958, pp. 317–334; H. Khatchadourian, *Family Resemblances and Classification of Works of Art*, “The Journal of Aesthetics and Art Criticism”, 28, 1969, pp. 79–90; W. Tatarkiewicz, *What is Art? The Problem of Definition Today*, “The British Journal of Aesthetics”, 11, 1971, pp. 134–153; P. Ziff, *The Task of Defining a Work of Art*, “The Philosophical Review”, 62, 1953, pp. 58–78.
10. See e.g. N. Carroll, *Beyond Aesthetics – Philosophical Essays*, Cambridge: Cambridge University Press, 2001, p. 86 f.
11. Cf. G. Prince, *Narratology: The Form and Functioning of Narrative*, Berlin: Mouton, 1982, pp. 1–4.
12. N. Carroll, *Beyond Aesthetics*, p. 88.
13. *Ibid.*, p. 113.
14. Cf. A. Potts, *Flesh and the Ideal: Winckelmann and the Origins of Art History*, New Haven: Yale University Press, 1994, p. 21.
15. N. Carroll, *Beyond Aesthetics*, p. 85.
16. Cf. M. Ranta, *Mimesis as the Representation of Types*, pp. 86–113.
17. See e.g. Aristotle, *Poetics*, trans. G.F. Else, Ann Arbor: The University of Michigan Press, 1967, 1148 b, p. 20.
18. See e.g. M. Donald, *Origins of the Modern Mind – Three Stages in the Evolution of Culture and Cognition*, Cambridge, Mass./London: Harvard University Press, 1991.
19. *Ibid.*, p. 282.

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20. For a general outline of Donald's view on art from an evolutionary perspective, see M. Donald, *Art and Cognitive Evolution*, [in:] *The Artful Mind*, ed. M. Turner, Oxford: Oxford University Press, 2006, pp. 3–20.
21. E. Dissanayake, *Homo Aestheticus – Where Art Comes from and Why*, Seattle/London: University of Washington Press, 1995, p. xii.
22. Cf. also E. Dissanayake, *What Art is and What Art Does: An Overview of Contemporary Evolutionary Hypotheses*, [in:] *Evolutionary and Neurocognitive Approaches to Aesthetics, Creativity, and the Arts*, eds P. Locher, C. Martindale, et al., Amityville, N.J.: Baywood, 2006, pp. 1–14.
23. Cf., however, the thorough discussion and overview in Stephen Davies *The Artful Species. Aesthetics, Art, and Evolution* (Oxford: Oxford University Press, 2012).
24. M.C. Beardsley, *The Aesthetic Point of View*, p. 308.

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The Dialogue of Philosophical Aesthetics: A Response to Naturalist Definitions of Art

Gustav Fechner's idea of doing "aesthetics from below," and his engagement in what he then called "experimental aesthetics" inaugurated a new strand of analysis that combines the study of the arts with scientific practices, among which neuroscience, studies on perception, and evolutionary psychology. Published in 1876, *Vorschule der Aesthetik*¹ was followed by a number of other movements and figures, from Rudolf Arnheim's work on the laws of perception in Gestalt psychology,² to more recent, and quite ambitious attempts toward a naturalization of the field of aesthetics. These include applications of evolutionary psychology to aesthetics (often referred to as adaptationist accounts), accounts that look at artistic behavior as a spandrel or as a by-product of evolution, and some of the solutions proposed by aesthetic psychologists, such as Jesse Prinz's account of emotions and aesthetic appraisal.³

The idea that aesthetics, from issues of taste to the conditions required for the definition of a work as an artwork, can be approached from a "naturalist" standpoint is certainly a fascinating one. It can also be argued that a naturalist approach might outgrow a number of theories, grouped under the term "institutional" and/or "historical" that, contrary to what is advocated by the aforementioned "naturalist" approach, find their strength in complex webs of theoretical conditions necessitating, at the very least, a deep knowledge of the history of artworks and of their intentional aims, a familiarity with the "Artworld" surrounding them at a specific time and place, and an extensive knowledge of competing theories, past and contemporary.

The "naturalist" approach relies on a number of appealing points. To begin with, the idea that culture can be treated as a natural phenomenon closely related to our evolution as a species delivers a more democratic promise to the analysis of art, one that can, in principle, free it from the burdens of erudite criticism.

The goal is to isolate a unified theory of aesthetics that, thanks to the contribution of scientific disciplines and experimental research, could disentangle and explain the system of aesthetic creation and appreciation. Such a theory would set the criteria for a cluster definition of artworks (a concept on which I will soon return), thus silencing the debate among individual theories. Secondly, along the lines of Dewey's conception of art as experience,⁴ naturalist studies have revamped the attention toward emotions, thus putting the audience's reactions at the forefront of aesthetic research.

For the purpose of this paper, I will limit my analysis to a branch of the "naturalist movement," and focus exclusively on Denis Dutton's Naturalist Definition of Art. My goal is to gauge whether his definition and the insights of evolutionary psychology are sufficiently powerful to replace the tradition of philosophical aesthetics. I propose a somewhat paradoxical solution; despite endorsing a naturalist approach, I do not believe that a naturalist definition can erase previous efforts in philosophical aesthetics. In fact, I will argue that such accounts can, when understood through the notion of "dialogue," provide art with a naturalist basis that is both more respectful of the complexity of aesthetic experience, and more accurate than Dutton's Naturalist Definition.

I will begin with a summary of Dutton's main tenets. In the second section, I will express my criticism and outline some of the reasons why Dutton's Naturalist Definition of Art cannot fully substitute previous accounts in philosophical aesthetics. Lastly, I will introduce the concept of "dialogue" in relation to art theory and criticism, and unfold what I believe to be the reasons relating the idea of dialogue to a more satisfactory and inclusive understanding of naturalist aesthetics.

Evolutionary promises

The connection between our psychological make-up and art is not an invention of evolutionary psychology. Aristotle's interest in *catharsis*, Hume's ambitious pamphlet *Of The Standard of Taste*, and Kant's common sense are regarded, by both Dutton and his critics, as attempts to recognize the presence of natural and universal features characterizing the modes of aesthetic experience. What Dutton and his critics disagree on is how to assess these observations, and, if accepted, on how to proceed beyond them.

According to Dutton, the potential of a naturalized theory of aesthetic preference, the natural heir of the standard of taste, or, à la Kant, of an intersubjective universal agreement, was shattered during the second half of the past century. What shattered it was a relativistic tendency where

aesthetic values were regarded as whatever culture taught was aesthetically valuable; aesthetic values and meanings were considered without residue constructed by culture, and works of art were both created and appreciated within the norms and conventions of cultures.⁵

Dutton's remarks are meant to target philosophers such as Clive Bell and R.G. Collingwood and their emphasis on formalism, George Dickie's institutional theory, and, inevitably, Arthur Danto's distinction between a work of art and a mere thing.

Dutton hardly touches upon any of these theories individually, nor does he engage in a consideration of their analytic faults; he instead points to recurring methodological biases. At least three elements, according to Dutton, affect the elaboration of historical and institutional theories. First, rather than investigating universal factors in aesthetics, non-naturalistic theories are confined within their own times, satisfied with prominent works and movements contemporary to them. Secondly, personal idiosyncrasies, and the consequent predilection for works to the liking of the authors, are too often the sole target of attention. Finally, and because of the very nature of philosophical rhetoric, historical and institutional theories are guilty of embracing extreme positions, positions that concentrate exclusively on providing explanations for the most bizarre cases, and that shy away from less eccentric, but, in Dutton's opinion, more meaningful works. One must only think of the number of theories stemming from works such as Marcel Duchamp's *Fountain* (1917) and *In Advance of a Broken Arm* (1915). This form of criticism is, I believe, a bit simplistic. Yet, the problem is not, strictly, whether to accept historical and institutional accounts, but whether Dutton's naturalist perspective can replace them.

In his analysis, Dutton relies on the findings of evolutionary psychology, and on the belief that cultural phenomena can be explained in terms of sexual selection and genetic inheritance. In evolutionary terms we have a Pleistocene mind, a mind that is nearly identical to the mind of our ancestors 10,000 years ago. Our psychological and emotional traits are based on adaptive mechanisms that were in place in a world that hardly resembles present day society. For instance, our Stone Age mind is still afraid of snakes, despite snakes not comprising a threat in present day New York City.

But being afraid of snakes helped our ancestors prosper. The emotions that developed in that distant environment were essential for survival and are still recognized, by our present brain, as positive or negative according to their adaptive value. Water, trees, and a fertile meadow tend to evoke more pleasant emotions than a rocky desert, thus showing a natural inclination to what was an obvious preference for hunter-gatherers.

It is on this point that art comes into the picture. We find artworks in primordial stages of our evolution, and it is plausible to justify the widespread presence of artworks and aesthetic practices in light of their adaptive value. There are at least two reasons for promoting this inference. First, art ignites emotions, and emotions are our best learning tool for survival. Second, the characteristics usually associated with the creation and appreciation of art are highly prized. The bright colors and adornments displayed in tribal dances can attract a future partner; the same can be argued for a vast vocabulary or poetic expressions, creativity, a sense of style, humor, and a number of other abilities such as story-telling, irony, etc. These abilities and traits provided the individuals who possessed them with higher chances of finding a mate, procreating, and surviving.

Art is in this sense a disclaimer in matters of sexual selection. This is not to say that Michelangelo's *David* is adaptive, but that some of its features, such as a proportionate body, youth, and strength are, and have been, fundamental to the Darwinian scheme of natural selection and sexual adaptation. As Dutton concludes: "[...] it is the display elements of producing and admiring artists and their art in the first place that has grounded art in sexuality since the beginning of the human race."⁶

In his book *The Art Instinct: Beauty, Pleasure, and Human Evolution*,⁷ Dutton moves a step further, and formalizes his findings in a theory of art that aims at defining what art is in naturalistic terms. Dutton presents a cluster definition of art, namely a definition that combines twelve recognition criteria that, holistically, draw the boundaries for the establishment of something as art. These criteria are: *Direct Pleasure*, *Skills or Virtuosity*, *Style*, *Novelty and Creativity*, *Criticism*, *Representation*, *Special Focus*, *Expressive Individuality*, *Emotional Saturation*, *Intellectual Challenge*, *Art Traditions and Institutions*, and the most important: *Imaginative Experience*. It is important to note that these criteria are observable cross-culturally, and that they can be found in non-aesthetic fields – we admire, for instance, the “skills” of a surgeon. Not every criterion has the same value; as mentioned, *Imaginative Experience*, a criterion related to Kant's disinterestedness, is more important than *Criticism* (the ability of a work to be presented alongside an evaluative analysis). Finally, criteria are meant to cooperate. For instance, *Direct Pleasure*, the immediate experiential pleasure triggered by the work, is enhanced by *Special Focus*: the bracketing of an aesthetic experience – the special setting, as a theater or a museum, in which we experience works of art.

An assessment

As mentioned earlier, it is not uncommon to find Dutton's reliance on evolutionary psychology appealing. Yet, his theory is subject to several lines of criticism. In this paper, I am primarily concerned with an assessment and analysis of his naturalist definition of art. However, it is worth outlining some of the objections that have been raised toward the bulk of Dutton's theory, namely the idea of building a theory of aesthetic behaviors based on evolutionary psychology. We have, in this case, two families of objections; on the one hand, critics have questioned the accuracy of some of the tenets of evolutionary psychology, and of their application to aesthetic behaviors. On the other hand, and more closely related to the objections I will be dealing with in the following section, critics have pointed to how Dutton's theory (and more generally theories of art based solely on naturalist criteria), can hardly encompass the nuances and complexities of the Artworld.

To begin with the first line of criticism, it is often noted that our present brain, contrary to what is argued by evolutionary psychologists, is not identical to the brain of our ancestors 10,000 years ago. Studies in neuroscience repeatedly point to the brain's high degree of neuroplasticity. True, evolution operates very slowly, but this does not mean that changes have not occurred. We are flexible and we adapt to the environment in which we live. There is abundant evidence, for instance, that so-called "intellectual technologies," namely technologies that extend our cognitive functions, can sensibly alter our cognition and reasoning processes. The philosopher David Buller, in this respect, emphasizes how we are able: "[...] to adapt to local environmental demands throughout the lifetime of an individual, and sometimes within a period of days, by forming specialized structures to deal with those demands."⁸

In addition, neuroscientist Stanislas Dehaene has recently developed the idea of neural recycling, according to which practices such as reading and arithmetic are based on the brain's ability to create new uses for evolutionary older circuits.⁹ It follows that even though our brain is, in evolutionary terms, similar to the one of our ancestors, it is nonetheless able to create new functions.

Two further objections address two of the key points of Dutton's argument, namely his theory of landscape preferences, and the connection between aesthetic behavior and sexual selection. Stephen Davies, in *The Artful Species*,¹⁰ points to how the open landscape offered by savannah-like environments might not have been what our ancestors would have necessarily chosen. Potable water and more hunting animals are certainly desirable, but being in an open valley like the savannah would not have protected our ancestors from potentially hostile

strangers. Lastly, the savannah hypothesis is weakened by the fact that human civilization developed in multiple and different environments across the globe, showing that, if anything, what matters in the link between the environment and adaptation is our ability to survive and to adapt to radically different conditions.

The fact that aesthetic behaviors or aesthetic features can lead to higher chances of procreation has also been called into question. Beauty and a proportionate body are fairly reliable health indicators, and they are likely to attract potential partners, but it would be mistaken to see in beauty, a central concept in Dutton's analysis, the *sine qua non* criterion for the selection of a partner. Like-mindedness, stability of character, generosity, etc. are equally important factors, and they are likely, in the selection of a mate, to matter more than beauty alone. The same is true for other aesthetic traits such as a vast vocabulary, creativity, story-telling abilities, irony etc.: despite being desirable, they are not necessarily conducive to survival, and perhaps less so than non-aesthetic traits such as stability, moderation, and strength.

The second line of objections questions whether the identification of a naturalist origin to aesthetic behaviors is sufficient for an analysis of artworks. Critics point to the distinction between an aesthetic preference, i.e. a proportionate body, and the vast and complex panorama offered by the art. Naturalist analyses tend to reduce the arts to a common cognitive and evolutionary denominator; such an approach can certainly shed light on brain mechanisms, and on how we interact with the environment, and yet, saying something about the brain is not the same as saying something about art. Evolutionary psychologists tend to limit their analysis to basic features of artistic production and reception that, albeit relevant, are by no means the only elements we should consider when attempting an analysis of artworks.

The question of whether a naturalist definition of art can score any better than more traditional interpretations follows from this latter family of objections. I would like to narrow the discussion to two main strands of criticism, and to further introduce a third line of analysis that I will further develop in the next section of this paper.

The first criticism addresses the nature of cluster definitions, and whether they fully satisfy the purpose of identifying something as a work of art. Berys Gaut has, in this respect, accused cluster definitions of anti-essentialism; a work unable to be properly defined by the twelve criteria need only to introduce a new one to be considered an artwork, thus making the definition of art too vague and open-ended.¹¹ As a response, Dutton emphasizes how, rather than adding criteria, borderline cases should be explained by recurring to potential combinations among criteria.¹² The solution to difficult cases does not reside, Dutton argues, in the introduction of new criteria, but in a careful analysis of how each

criterion affects the others. Differently put, the solution to the problem of the definition of art requires the joint consideration of naturalist criteria, and, one might add, a bit of alchemy.

The second strand of objections questions whether a naturalist definition can provide a satisfactory response to aesthetic conundrums such as the problem of forgeries, the role of artistic intention, or apparent contradictions, as in the unnerving case of Komar and Melamid's project *The Most Wanted Paintings* (1994) which aimed to (among other goals) critically highlight how features that the public considers "most wanted" can compose a painting that no critic would ever evaluate positively.¹³ Dutton responds to these objections in his chapter *Intention, Forgery, Dada: Three Aesthetic Problems*.¹⁴ I am not here concerned with this side of the debate; I do find some of Dutton's arguments to be quite plausible, but I am also under the impression that these might not be the most urgent questions. Responding to these questions is not sufficient, in other words, to establish the validity of a naturalist definition – a point to which I will return in the next and final section of this paper.

Lastly, I wish to introduce my own take on the debate. As mentioned in the introduction, what I find most troubling about a Naturalist Definition is its dismissal of historical and institutional positions in philosophical aesthetics. My concern, to put it bluntly, is that Dutton's arguments might end up depriving art of the kind of criticism and analysis that makes art a unique feature of our species. I will begin my criticism with an assessment of Dutton's most important criterion, namely, Imaginative Experience. I will then introduce the idea of "dialogue" as an essential metaphor for the analysis of the arts. Finally, I will suggest that it is precisely within the idea of art as a dialogue that we can see aesthetic behaviors as adaptive.

Imaginative experience and philosophical aesthetics

Dutton defines *Imaginative Experience* as follows:

[...] objects of art essentially provide an imaginative experience for both producers and audiences. A marble carving might realistically represent an animal, but as a work of cultural art it becomes an imaginative object. [...] This is what Kant meant by insisting that a work of art is a "presentation" offered up to an imagination that appreciates it irrespective of the existence of a represented object: for Kant, works of art are imaginative objects subject to disinterested contemplation. All art, in this way, happens in a make-believe world. This applies to nonimitative, abstract arts as much as to representational arts. Artistic experience takes place into the theater of imagination.

And again:

[...] the experience of art is notably marked by the manner in which it decouples imagination from practical concern, freeing it, as Kant instructed, from the constraints of logic and rational understanding.¹⁵

Dutton relies, in his definition, on the Kantian concept of “disinterestedness.” Dutton’s reliance on Kant is controversial to say the least, and prone to criticism. Contemporary aesthetics has taken distance from Kantian aesthetic concepts such as disinterestedness and the freeplay of the imagination. Critics and artists alike seem instead to agree on a more inclusive notion of aesthetic experience, one that, in part inspired by Dewey’s essay *Art as Experience*, opens aesthetic analysis to a wider set of questions and concerns.

For instance, Imaginative Experience exclusive connection to the make-believe world leads one to conclude that works of nonfiction, hence works that do not rely on any make-believe mechanism, such as Truman Capote’s *In Cold Blood*, memoirs, or even nonfictional essays, are not works of art. Yet, to reach this conclusion would raise more than one eyebrow.

Even embracing the notion of make-believe that characterizes fictional narratives is not enough to support Dutton’s twelfth definitional criterion. Since Aristotle, accounts of fiction have taken its pedagogical role into consideration. Fictional narratives, whether filmic, literary, or of other nature are often charged with strong ethical considerations; they trigger in us an evaluation of character that can lead to dispositional changes and to very practical self-governing policies. There is, in other words, interest. In fact, it can be argued that practical interest is proportional, in a number of cases, to aesthetic appreciation. It is my being absorbed in Daphne Du Maurier’s *Rebecca* that leads to practical considerations concerning her character in the book as well as my own dispositions in real life. The unnamed protagonist obsesses over the defunct former wife of her husband, the mysterious, gorgeous Rebecca. Asking myself how I would react if I had to live in the shadow of the former (and plainly more beautiful and capable) wife of my husband is a legitimate aesthetic experience, but one informed by practical, ethical, and social concerns.

Lastly, a broader conception of aesthetic experience has recently allowed for promising developments in aesthetics such as everyday aesthetics. An example is the burgeoning work in the aesthetics of food. Philosophers such as Carolyn Korsmeyer, Aaron Meskin, and others have led to a rediscovery of food and eating practices based not on whether food itself can be considered art – a question that is, however, not entirely dismissed – but on the aesthetic experience that is often associated to food and eating practices. Such activities

require an in-depth reflection on the functional, social, and ethical components of eating, and they simply can't be analyzed within the framework of disinterested contemplation.

The exclusion of nonfiction from imaginative experience, the ethical import of fiction, and the attention to everyday life and activities paid by new branches of aesthetics are only some of the reasons why a deeply Kantian criterion such as Imaginative Experience cannot capture the reality of art and aesthetic behaviors.

However, claiming that imaginative experience and disinterestedness are unlikely to be discriminatory criteria for the recognition of something as art is not enough to fully dismiss the validity of a naturalist definition of art, nor does it justify an eventual return to more traditional accounts in philosophical aesthetics.

To accomplish my goal, namely, to preserve the contribution of philosophical aesthetics, while recognizing the importance of naturalist criteria in the analysis of art, we should, I propose, turn our attention to a different kind of "failure" in Dutton's definition. In addition to the failure associated to the usage of Imaginative Experience as the leading criterion for the recognition of something as art, Dutton's account falls short in understanding what a naturalist analysis of art might truly imply. Moreover, and more provocatively, I am also willing to argue that a more complete understanding of the naturalist basis of art has long been a component, whether consciously or not, of the accounts in philosophical aesthetics that Dutton sharply criticizes.

This point is in need of further clarification, but suffice to say that philosophical aesthetics has been able to capture a complex, and fundamental feature of both the creation and the appreciation of artworks. Philosophical aesthetics has highlighted how the creation and appreciation of art is often the product of what I will refer to as a "dialogue." Specifically, I am interested in the affinity and parallel between the progression of dialogues – their blossoming, continuity, and unfolding – and the dialogue that has been offered by the interwoven relation of art and art criticism. Such a dialogue, and the multiple shapes and directions it has taken, is exemplary of what I believe to be the only truly naturalist and adaptive contribution of art.

Art and aesthetic behavior do not directly increase our chances of survival, nor do they play a truly significant role in sexual selection and reproduction; however, aesthetic behaviors and art still claim a natural and adaptive basis in being highly influential in the promotion of a refined sense of community, in the establishment and critique of social norms, and, more generally, in their contribution to the conception of human beings as social beings. Such concepts are essential to our evolution and survival, and should be accounted for when looking into the possibility of a naturalist basis for the arts.

The dialogue that, I argue, has been introduced by philosophical aesthetics stems from this enlarged conception of adaptation. Philosophical aesthetics is a valuable tool to foster our development as social beings, and it can, in this sense, relate and respond to evolutionary and naturalistic needs. In what follows, I will consider a few aspects of the “dialogue” established by philosophical aesthetics that are, I argue, particularly relevant to the understanding of dialogues as a naturalistic and adaptive need.

A dialogue in three acts

Encounter

A dialogue can spring out of sheer curiosity, it may start after overhearing something that catches our attention, it can be the product of noticing a detail we have not previously caught: a dialogue is a form of communication, our best, fastest, and likely most effective tactic for sharing knowledge. Ultimately, dialogues are forms of encounters; they constitute the very fabric of our interactions with other human beings and the world. The notion of encounter is crucial in philosophical aesthetics. Several theories in philosophical aesthetics stem from reflections on the impact of the very special encounter that is the encounter with artworks. Examples abound: Leo Steinberg tells us about the complex feeling that his first encounter with the work of Jasper Johns caused him;¹⁶ he moved from anger, to depression, to a state of anxiety, to the realization that the work is, and will remain, a problem. A similar experience occurred to Arthur Danto¹⁷ with Warhol’s *Brillo Boxes*; the list can go on. What characterizes these encounters seems to be a movement from puzzlement to the recognition of a deeper, and indelible reality. Both works are related to the advancement of Pop Art; they are significant in their revolutionary and challenging role in the history of art, and in their questioning of the boundaries of art’s definition. The encounter with these works, and the dialogue they provoke are essential to the definition of art – a dynamic that has been amply recognized by philosophical aesthetics.

Artists also need to be included. Francis Bacon’s *Study After Velazquez’s Portrait of Innocent X* (1953) is the product of an almost manic interest following from his “encounter” with Velazquez’s *Portrait of Innocent X* (1650). The work exhibits ethical connotations, the malign smirk of the Pope, a sophisticated reflection on the art of portrait (in which Velazquez excelled), and an actual curiosity in Velazquez the painter, whose life and artistic career were split between aristocracy and common folk. When looking at Velazquez’s today, most of us are deeply aware of Bacon’s work. We simply cannot ignore that the two “met,” and that their meeting has allowed for another dialogue, or, perhaps more correctly, for

the revitalization of a dialogue that, because of its social, emotional, and political components, was not, and is not dead.

A first distinction between a strictly naturalist approach and the tradition of philosophical aesthetics resides, I believe, precisely in this first step: in the way in which the “encounter” with an artwork is understood. Naturalist definitions rely on a scientific methodology commanding us to dissect, separate, recognize, and eventually combine the different components of a work. The naturalist critic is active, but not involved. He is active in recognizing what might count as “aesthetic traits,” and yet, such an encounter lacks the expectations, emotions, curiosity, and eventual puzzlement or bewilderment that often characterizes artistic encounters. This latter, perhaps more complex reaction is harder to capture and describe, but it is nonetheless an intrinsic feature of the way in which human beings respond to art. By charging the encounter with art with what Dutton describes as idiosyncrasies, personal preferences etc. philosophical aesthetics might have come closer to the way in which we “naturally” react and interact with dialogues.

Curiosity and conversation

Dialogues can also be analyzed in terms of the conversation they afford, and in what are referred to as the “conversational interests” we have in our experience of artworks. The idea of conversational interests has been brought up by Noël Carroll as a justification for his defense of intentionalism in literature.¹⁸ Carroll begins by comparing the interaction between the audience and the artwork to the conversations we have in daily life. For such conversations to be valuable, Carroll argues, we need to have the belief that we grasp what our interlocutor “intended” to say, or our conversation would not have any truly communicative function. A very similar mechanism is in place when we read a literary text. We have an interest, in other words, in what the author intended to communicate. Reading a literary text involves engaging in a serious conversation with the author; we want to know what the author wanted to express, his or her values, and the meaning that the author attributes to what is written. As an example, Carroll points to our interest in knowing what Tom Wolfe thought about New York in *Bonfire of the Vanities*, and to the importance of grasping such intentions in the analysis and evaluation of a work.

Another stellar example of our conversational interest in artworks is literary autobiography. Autobiographies, or, as it has become more common nowadays, memoirs, combine a form of self-reflection on the part of author, with the desire to disclose their own life to the readers. Such a disclosure takes multiple forms,

from confession, to the need of being understood, to, in certain cases, a cry for forgiveness, and yet, all these manifestations are based on the assumption that an interaction between the audience and the author is indeed taking place.

Art criticism and philosophical definitions of art cannot overlook conversational interests, and the direct, ongoing connection that we have with the ideas and concepts they portray. Dutton's naturalist definition leaves this feature out of the picture, thus eliminating the strongly relational quality of artworks. Dutton's naturalist definition ignores our interest in conversing with the very artists who produced the works we are contemplating. This interest is animated by a strong degree of curiosity, and by the desire of seeing the artist as a fellow member of a community to which we all belong. Recognizing the intention behind a work – a criterion listed by Dutton – is not sufficient. We need to recognize that such an intention is part of a conversation, and that the outcomes of such a conversation, its unfolding, and the questions it triggers, are essential to the establishment and recognition of something as art.

Social consciousness

Lastly, dialogues enable us to develop a form of social consciousness, to, in other words, recognize that the interaction with others is a way of fostering our presence as social agents. Art, and the criticism provided by philosophical aesthetics enforce and deepen this aspect of dialogues by making us reflect on questions related to historical occurrences, on social concerns, and, more broadly, on the questions that characterize our existence as citizens of an increasingly complex world. The idea of dialogue as a form of social awareness and social consciousness has taken multiple directions, and it has proven effective, if not, at times, subversive. It is impossible to summarize the main tenets of such a conversation, but we can at least briefly look at one of its dimensions, namely the relation between the dialogue of art and art criticism, and moral and political commitment.

Michael Kelly in *A Hunger for Aesthetics*¹⁹ analyzes precisely this connection. Kelly begins his analysis with the interaction between the social, economic, and political challenges of Pop, and the work of philosophers such as Susan Sontag, Arthur Danto, Stanley Cavell, and Umberto Eco. This interaction is emblematic of a “hunger” for aesthetics, namely for a philosophical and critical research of the aesthetic strategies enacted by contemporary artists as critiques of moral and political conditions. Aesthetic theories must look for the aesthetic choices that allow for a dialogue and confrontation with the socio-political fabric of reality.

The kind of hunger described by Kelly is, I believe, essential not only in terms of a reflection on culture, but also in relation to the naturalist advantages that

a reflection on society can lead to. The importance of realizing social concerns and questions, as well as engaging with them in a committed fashion is a way of building a more solid, cohesive, and structured community. Such social advantages are hardly considered by Dutton's definition that is instead limited to how a subject or individual reacts to aesthetic stimuli. Yet, contemporary art and philosophical criticism show how reacting to aesthetic stimuli is not an exclusively individualistic endeavor; when we react to art we also react to the meaning art has for us not as tokens, but as part of the social corpus.

Kelly considers a number of artists and theories dealing with political content and engagement. Among them, he analyzes Gerard Richter's *October 18, 1977* painting series (*Baader-Meinhof* series) in relation to Richter's own writings. The paintings are based on documentary photographs of the dead bodies of the leaders of the late 1960s terrorist group. Richter's visual strategy is neither to condemn nor to commemorate, but to question the deaths of the members of the group and, at the same time, to hint at an analysis of what they did, their aims, and their role within the German community at that time. Richter does not take sides; he instead starts a conversation with his audience. The conversation initiates within the paintings themselves: Richter's paintings intentionally blur the documentary photographs, they question their objectivity and, while questioning, they abet reflection. Richter's take on a historical situation translates into a demand and an opening to the audience.

It is on this point that I would like to conclude my brief analysis of the "dialogue" of philosophical aesthetics. I examined the idea of "dialogue" as a form of encounter, as a way of "conversing," and as an opening to "social consciousness." These aspects, essential to our survival as social beings, have been captured, in different ways and with different accents, by centuries of philosophical aesthetics. They define our encounter with art, while defining the nature of art itself.

Concluding remarks

A powerful feature of dialogues is their "taking place," their actuality, their unfolding. To only listen to one voice, or to develop a chart of how often each voice is heard, an analysis of respective tones etc. would not do justice to the nature of the dialogue. It would make it, I believe, rather unpleasant. Philosophical aesthetics, artists, and artworks are not only the members of a dialogue where different factors combine; they are *permanently at a dialogue* – stuck in some kind of extended present. We can single out elements of this dialogue, we can dismember it and check what combination of mutilated voices can lead us to the recognition of a work of art; we can dissect each component, and yet, by doing so,

we destroy the very reason why we initially appreciated art, and why we created it – our love for dialogues. It does not matter how complex a combination of criteria we can find in a given work; any combination will miss the ephemeral, idiosyncratic, vivacious nature of aesthetic creation and appreciation.

“Dialogue” is, in this paper, a metaphor to describe something that belongs to the tradition of philosophical aesthetics, and yet, it is also something else. It is my belief that the dimension of dialogue might also be what is missing from strictly naturalist accounts of art as the one presented by Dutton. I do not discard the idea that art can be analyzed in parallel with our evolution as a species, and I am not, in principle, against naturalist definitions. But I believe that art has helped our adaptation in ways that are much more complex than the ones described by Dutton, and that no list of naturalist criteria will ever be able to capture such an interaction.

The solution I proposed looks at the role that art and aesthetic features had and have in the development of human beings as a social species, and as a species that, as the characterization of dialogue provided explains, depends on constant interactions. It is in this broader sense that philosophical aesthetics can be thought as being more “naturalist” than assumed by its critics.

We should stop pretending that art can be defined by a set of criteria and look instead at its vast array of potentials as the most brilliant system of communication in our possession. More than investigating which naturalist criteria define art, we should start contemplating the cognitive questions and effects that art and the dialogue of criticism, appreciation, and creation have proposed to us – a compelling dialogue indeed, from the Pleistocene on.

Endnotes

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14. D. Dutton, *The Art Instinct...*, pp. 164–202. Komar and Melamid's work is instead justified in terms of environmental preferences.
15. D. Dutton, *Aesthetics and Evolutionary Psychology*, pp. 58–59.
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18. N. Carroll, *Art, Intention, and Conversation*, [in:] idem, *Beyond Aesthetics. Philosophical Essays*, Cambridge: Cambridge University Press, 2001.
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From *The Art Instinct* to *The Artful Species*. Evolutionary Explanations, the Problem of Defining Art, and Some Minor Remarks on the Growing Field¹

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In this paper I discuss the issue of the adequacy of the concept of art and evolutionary explanations. Although evolutionary approaches to art and aesthetics gain big audience there is no established position in the field. Also, the concept of art has evolved through a series of definitions, often mutually exclusive. Denis Dutton's "cluster concept" of art is a not entirely successful attempt at joining the analytical definition of art with evolutionary approaches. Not entirely successful does not mean false. Dutton and Ellen Dissanayake manage to formulate a convincing argument showing that art constitutes a pre-conceptual natural category of human existence. The folk concept of art can be considered as a kind of bridge between the analytic definition of art and the ethological approach to the study of art behaviors, presented among others by Ellen Dissanayake and criticized, just only recently, by Stephen Davies.

Evolutionary aesthetics – the art between function and adaptation

Ellen Dissanayake (*What is Art For?, Homo Aestheticus, Art and Intimacy*), late Denis Dutton (*The Art Instinct*), and just recently Stephen Davies (*The Artful Species*) became known among aestheticians for attracting attention to and popularizing a new trend in naturalistically oriented aesthetics. Evolutionary aesthetics (i.e. the evolutionary theory of art, evolutionary approaches to art and aesthetics) is a discipline that tries to explain the foundations of human aesthetic preferences in relation to art, focusing on adaptive (in the biological sense) values of different forms of artistic activity. It perceives art (both in the

context of its creation and admiration) as a universal property of the human mind, yielding natural pleasure and generating an indispensable component of the human psyche. The approach is naturalistic, because it maintains that art is present (in various forms) in all known cultures and that we can talk about para-cultural and para-historical methods of its assessment and evaluation.

The traditional Western perception of art is based on several, quite different, perspectives. One that is extremely popular recognizes art as a category of little meaning, stripped of significance, and regards the notion of art as inconsistent, not related to any particular class of phenomena. Such concepts, following Wittgenstein, we call “open”. In some circles, a very popular position is that there is no universal concept of art, but only the “Western” concept, which originated in the eighteenth century in Europe. The last few decades of the theory of art saw the domination of another position. It proclaims that art can be fully described and analyzed through the prism of culture, cultural tradition, or cultural diversity. We call this view cultural relativism. There are also a number of approaches in the theory of art, present at least since Plato, which emphasize art’s “functional” nature. They argue that art can be described in relation to its function or a group of functions (theories: mimetic, expressionist, communicative, institutional). This kind of approach seems to confirm the general view of the importance and significance of art for the human condition. Let us pause for a moment at the position referring to the function of art.

The key to understanding the nature of controversy in the adaptive functions of art (the main axis of dilemma in evolutionary aesthetics) is the concept of biological adaptation. The history of this term and how it functions in evolutionary discourse (in biology and evolutionary psychology, but also in social sciences and thinking about art) calls for a thorough analysis. The notions of art and its scope, however, are usually considered from the point of view of aesthetic theory. What poses the greatest difficulties to the theorists of art is going beyond the aesthetic perspective to adopt a nativist perspective and, furthermore, to look at art as a natural, indispensable feature of human mental equipment. The naturalistic accents present in aesthetic theory (i.e. in Dewey’s pragmatist aesthetics), achieved matured theoretical expression in evolutionary aesthetics, and this provides a good basis for a new approach to this universal human phenomenon.

Reference to hidden or implicit functions of art is more in line with evolutionary explanations, because this model seeks to identify those features of objects that might indicate their adaptive value. Functional explanations in art theory (similarly to the functionalist explanations in psychology) are based on the belief that one cannot understand art without examining which needs are addressed by art and what role it plays in enhancing the biological adaptedness of its manufac-

turer or recipient. At the same time, we can understand adaptation, in the social sense, as a result of a process in which the psyche of an artist or a recipient comes to a balance between the psychological needs and the requirements of the social environment. The problem of the function is implicitly the problem of adaptation. If we say that “something is fulfilling its function” (e.g. it is communicating) we mean a situation in which the word “fulfilling” creates an advantage over the situation in which it does not occur. The function itself is thus a possibility that, if it is realized, enriches the medium by a better adaptation to the conditions to which it relates. If communication takes place, it may save someone’s life, ensure survival, facilitate adaptation. Nevertheless, that is where the similarities end.

Adaptation in the biological sense is something quite different than the adaptation to social conditions. The first takes place in evolutionary time (tens of thousands of generations); the second concerns the individual development of a single life. The first is the vehicle of innate biological characteristics; the second concerns “soft” psychological traits acquired during an individual’s life. The first is written in the genes and reveals itself spontaneously, almost without encouragement from the environment; the second requires training and does not affect the shape of information stored in DNA. Something that is an adaptation in a social sense, a learned mental function of individual development, may not be (and usually is not) an adaptation in the biological sense (I intentionally reserve the term “adaptation” for evolutionary functions in order to distinguish them from “adjustments to social conditions”). Although, the ability to read and write helps in social relations and is undoubtedly an important element of adjustment, it is not adaptation. It is impossible to prove which of these activities gave an evolutionary advantage to our ancestors in relation to those members who were deprived of them. If in some representatives of *Homo sapiens* living in a hostile savannah environment, the intuitive fear of snakes – a typical example of biological adaptation – did not evolve, they were condemned to a gradual extinction. Art, which appeared before the invention of writing and probably long before the invention of speech, can be considered as a potential adaptation - a product of both culture and human biology. Did it help our ancestors to survive? Did it give an evolutionary advantage to the individuals who took up the effort of “ratification”?

Denis Dutton – aesthetic universals and the naturalization of aesthetics – the cluster account of art

Denis Dutton, who was strongly influenced by E.O. Wilson and his theory of gene-culture co-evolution, is aware of the fact that “it is something else altogether to connect the structure and function of the immune system or the inner ear

than to claim that evolution is somehow associated with the image of Albrecht Durer or the poetry of Gerard de Nerval.” And further:

On the other hand, it makes no more sense to claims that our artistic and expressive lives are determined only by culture, as it does to say that we are determined only by genes. Human beings are a product of both. Why can't we get over our post-Marxist nostalgia for economic or cultural determinism and accept human reality as it actually is? The truth of the human situation is that we are biologically determined organism that live in a culture [...]²

Dutton seems to be aware of the fact that many philosophers (and amongst them many aestheticians) are reluctant to apply psychology to values, especially if it means the naturalization of those values as a permanent component of our evolving human nature. He reflects on it often in the pages of *The Art Instinct*. However, he asks: “What better use is of ‘culture’ than as a universal explanation for values?”³ In his opinion, “real naturalized” and therefore Darwinian description of aesthetic experience “should be to some extent speculative, assuming, however, with special satisfaction the empirical evidence in the form of the results of evolutionary psychologists’ research”⁴ which could lead to the confirmation or strong rebuttal of proposed hypotheses. It would not, in his opinion, stand in opposition to the descriptions of aesthetic experience as a unique cultural expression, but would strengthen such views by placing them in a universal perspective. Vividly, he argues that:

scientific linguistics does not reduce the enormous diversity of human languages to a single impoverished code; similarly so scientific, naturalized aesthetics would not reduce art to anything less than the rich, life-giving power that is art.⁵

Dutton, in order not to reduce this “rich, life-giving power”, proposes employing analytical “cluster” definition of art to describe art as a natural category. This definition is composed of a set of so-called recognition criteria, twelve in Dutton’s version, which are: (1) direct (impractical) pleasure, (2) skill and virtuosity, (3) style, (4) novelty and creativity, (5) criticism, (6) representation, imitation, (7) special focus, (8) expressive individuality, (9) emotional saturation, (10) intellectual challenge, (11) art traditions and institutions, and (12) imaginative experience⁶. Dutton calls these criteria “special features” of art, noting that each can also apply to activities unrelated to art. “Cluster” means that the definition is disjunctive (in contrast to a “bound” definition, which is conjunctive), and hence accepting an object as art does not require it to conform to all of the criteria (does not require the conjunction “and”) but only to some of them (disjunctive connector “or”). At the same time, the degree of “artistry”

of work is not determined by the number of criteria that are satisfied. This is determined, rather, by the quality of what satisfies criteria. And so, for example Dutton ranks (12) as the most important criterion. In his view as a philosopher and connoisseur of art, it more accurately identifies the essence of artistry. Although the final of FIFA World Cup fulfills (1), (2), (5), (7), and (9), according to Dutton, it cannot be regarded as a legitimate work of art because it does not satisfy (12). If a work of art directs us towards imagination (football match can be a substitute for this experience, but its primary goal is to “win” in the real world), in terms of aesthetics it is superior to that which does not.⁷

According to Dutton, the criteria that make up the definition

are not chosen to suit a preconceived theoretical purpose; to the contrary, these criteria purport to offer a neutral basis for theoretical speculation. The list could be described as inclusive in its manner of referring to the arts across cultures and historical epochs, but it is not for that reason a compromise among competing, mutually exclusive positions.⁸

The definition, therefore, can accurately and precisely define art, but also can constitute the neutral basis for theoretical speculation about this universal human phenomenon. Equipped with this definition, the naturalistically oriented researcher has a handy tool that is designed to reflect the vast realm of human experience, which people spontaneously across history and cultures have identified as art (despite the theoretical difficulties posed by the diversity of the world of artistic creations). In *The Art Instinct* Dutton says that with this definition one can also try to investigate – it seems that there is no direct link to the concept of cluster definition – the extent to which this diversity is limited by the evolutionary architecture of the human mind, which typically establishes the “universal grammar” of art. So Dutton commits himself, therefore, to a certain “exclusive position”.

Also, Dutton argues that the methods of enhancing and assessing hypotheses on the adaptive function of art should include, in addition to philosophical and aesthetic knowledge, empirical knowledge:

Why not work with psychologists to understand better cross-cultural preferences in picture content? Are there psychological mechanisms that account for the satisfactions of group singing or of sharing an artistic experience as the member of an audience? Can we identify and statistically analyze recurrent themes and ideas in drama and literature? [...] Art has little practical value, but can deliver intense pleasure. Why? Aestheticians, please explain.⁹

In *The Art Instinct*, he develops and maintains his position that evolutionary empirical knowledge about art should be ordered and verified using cluster

definition criteria (connotative criteria of disjunctive definition), which he calls “universals” following the example of the anthropologist Donald Brown. The problem, however, is that it is not certain whether these criteria actually can be considered as universal, thus the same can be said about adequacy of cluster account and evolutionary perspective.

Cluster definition, borderline cases and uselessness to evolutionary explanations – a criticism by Stephen Davies

In *The Cluster Theory of Art* (2004), Stephen Davies – referring to the early version of Dutton’s cluster account¹⁰ – sees it as a promising indication of the potential features that make something art (although, he does not go as far as to say that the cluster definition is an anti-essentialist definition), and that “art can be defined in terms of necessary and sufficient conditions” (contrary to Gaut’s belief that it rather supports anti-essentialism in aesthetics)¹¹. In the recently published book, *The Artful Species*, Davies slightly modifies his position, arguing that adequate definition would have to determine which combinations of features are sufficient to constitute art, which cluster definition, according to its definition, cannot do (as it is a disjunctive definition) and that the intentional and subjective nature of the particular criteria is its weakness.

He considers, therefore, that the cluster definition approach is not suitable for evolutionary analysis of art, because it does not work as a definition of art for at least two reasons: firstly, contrary to the declared “universalism”, on the one hand, it focuses on the characteristics of Western art starting from the 18th century, such as originality, cognitive complexity, distinctness from the everyday, and expressive individuality. And it ignores the characteristics relevant to the art of traditional communities as stylistic faithfulness, deference to tradition, uncomplicated accessibility (i.e. features that should be an important point of reference for evolutionarily oriented researcher). Therefore, it is ethnocentric. Secondly, it cannot determine which objects fall under the concept of art, so it has little theoretical value: “Without specifying exactly which combinations of the properties are sufficient for something being art and under what circumstances, which is something cluster theories never do, the cluster theory is of no help to us.”¹²

It seems, therefore, that Davies himself opts for another type of disjunctive definition (also of “cluster” type, with the conjunction “or”), such that is able to contain both the 18th century art and tribal art. This definition works with far fewer and different kinds of disjuncts than the Dutton’s cluster account.¹³ And, also he does not establish a link between his definition of art¹⁴ and debates over the possible evolutionary significance of art.¹⁵

Another of Davies' objections that cluster approach – contrary to the claims of Gaut and Dutton – cannot be used successfully to determine the status of borderline and controversial cases in art seems to be rather unfounded.

In my opinion, Dutton is not interested in borderline cases, as much as Davies perceives. What is more, an intense search for them is considered by Dutton to be the bane of the modern theory of aesthetic and expression of its anti-universalistic tendencies (when he describes Duchamp's Fountain in *The Art Instinct*, he points out its versatile features, allowing it to include "typical" cases of art). He believes, rather, that the cluster definition can be successfully applied to defining an "uncontroversial center" of definition of art (in accordance with the well-known legal maxim that "bad cases make bad law"), instead of focusing on the "periphery". The view that theories of art should conform to the extremes is perhaps a case of what is sometimes called "the philosopher's fallacy." As Johan de Smedt points out, "Philosophical theories can capture important and interesting features of art, but this does not mean that philosophical knowledge is infallible. Indeed, if it were, philosophy would be an exceptional discipline, as knowledge in all other domains of human knowledge is fallible."¹⁶

Dutton's best defense of "recognition criteria approach" in the context of Davies' criticism, seems to rely on his folk concept of art, or in other words, the concept of "natural category", which he introduced in Chapter 3 of his book.¹⁷ By natural category he means a concept that is specified in all known cultures so that we can talk cross-culturally and cross-historically about its classification and evaluation, yet nevertheless takes various forms and has a culturally variable character. I agree with Dutton, who states the idea in the following way:

Many of the ways art is discussed and experienced easily cross culture boundaries, and manage a global acceptance without help from academics or theorists. From Lascaux to Bollywood, artists, writers, and musicians often have little or no trouble in achieving cross-cultural aesthetic understanding.¹⁸

That means that art (like other natural categories: religion, family, war, or language) is a rich, disseminated, and highly diverse territory of human activity and human experience, which existed long before the advent of philosophers and theorists. It is, therefore, one of the exceptionally significant and simultaneously obscure, and at the same time incredibly tangible and permanent areas of human life that still elude theory, while remaining within the definition of analytical (as certain capturable "non-controversial center"), but not fulfilling the function of the definition.¹⁹ Recognition criteria are supposed to identify essential features of art but not to define art *per se*.

Contrary to the declared critical attitude to Dutton's "recognition criteria approach" Davies, in my opinion, supports this approach when he recognizes the existence of a pre-conceptual ability to recognize the category of art (another version of the folk concept of art), and says it can be, and originally must have been, "made by people who either did not possess the concept of art or had only a rudimentary conception of art."²⁰ At least with respect to folk art, this supports Kennick's position²¹ that an ordinary person would know what to save from a burning warehouse when told to rescue the works of art, but the same person would be confused if given a philosopher's definition of art. If the warehouse also contained conceptual art, ready-mades, found objects, then the person would most likely fail the test, however.

Davies vs. Dissanayake's ethological approach

Despite having written an insightful book on the growing field of the evolutionary approaches to art and aesthetics, Stephen Davies does not define himself as an evolutionist. First of all, he is a philosopher of art, with a special focus on philosophy of music. Although not an evolutionist, he knows the theory of evolution very well. He has also an excellent sense of what he calls "bad science". As he is not only an expert but also an author of analytical definitions and ideas binding in contemporary aesthetics, his book offers a level of depth and expertise unsurpassable for aestheticians. Contrary to Dutton, whose studies of evolutionary aspects of art and aesthetics led to a change of his own philosophical image – from an advocate of tribal art and an anti-postmodernist ideas to an evolutionist – Davies appeared not to be convinced that the current state of evolutionary studies of the origins of art is sufficiently persuasive to change a former theoretical position, to become a convert. He created the work which introduces a new higher level of philosophical debate to evolutionary approaches to art and aesthetics. That is enough for him.

On the other hand, Davies thoroughly hides that anything crucial that science says about human nature and its evolutionary history can somehow influence his way of philosophizing, establishing and using philosophical techniques or meticulously formed concepts.²² However, he cannot hide that he is fascinated by new scientific theories and hypotheses. I think that from this duality, in which Davies gets involved, the paradoxical situation arises, which appears when he criticizes Dissanayake – a situation the explanation of which cannot be found in his book.

Contrary to this, the author of *Homo Aestheticus*, Ellen Dissanayake, is recognized as a pioneer of the evolutionary trend in the contemporary aesthetics.

What is more, she considers herself an evolutionist. That means that she tries, above all, to argue based on the knowledge offered by evolutionary sciences to demonstrate that the ability defined as “artification” or “making special” is a universal adaptive characteristic of the human mind.²³

Davies’ line of critique of Dissanayake is very similar to that of Dutton. He scolds her for the lack of an adequate definition of art (listing, among other things, the defining inconsistency)²⁴ and he finds her concept “making special” too broad (because it includes the concepts of “game” and “ritual”).²⁵ As is well-known, he opts for an analytic definition of the disjunctive type and he devotes a lot of space to various variants of analytical definition of art in Chapter 2. In my opinion, Dissanayake’s conceptual inconsistencies recede into the background if we assume, that art has an evolutionary value connected with behavior, that is, with the activity of producing and performing it. Art (definitely not above all in this conception) did not originate in the 18th century (based on disinterested contemplation); it is not an object of interest for a bourgeois connoisseur for whom it becomes, first of all, a symbol of status (absolutely separated from nature, which reminds him of his low roots as well as from everyday life, which reminds him of his work). It is worth adding that Dissanayake refers to Dewey here, among others.²⁶

Despite the fact that Davies rejects Dissanayake’s “ethological” definition of art as too broad²⁷, he uses a similar one with reference to music – “If we are to consider the connection with evolution, we must focus on human dispositions to act in certain ways, rather than on the artifacts or products”²⁸ – calling it all kinds of “music behaviors.”²⁹ Finally he adopts the concept of “aesthetic behavior”³⁰ introduced and promoted in various ways for many years by E. Dissanayake.³¹ In this way he leaves Dutton’s “object oriented” approach (see the criticism of Dutton’s approach in Dissanayake³²) as well as his own and he recognizes the “ethological” approach as more useful to the evolutionary analysis of art. It is *de facto* an agreement with Dissanayake’s broader view of art, which he criticized repeatedly and which opposes his own concept of art from Chapter 2 of *The Artful Species*. (Dissanayake’s “ethological” approach was recently developed in an interesting way by, among others, De Smedt and De Cruz.³³)

Other critics of Dutton (by Dissanayake, Matthen and Casati) and some response

The reason why Davies criticizes Ellen Dissanayake seems to be very common with the way Dissanayake criticizes Dutton, when she focuses on combining cluster definition with evolutionary perspective. Since she offers her own cluster

account³⁴ that is much more action- than outcome-oriented than Dutton's, her criticism states that contrary to Dutton's intention his definition is useless in determining whether art is a biological adaptation (by-product? solely a cultural creation?) as it focuses on the aesthetic content of art rather than on art as a behavior important from an evolutionary point of view:

In order to establish that a human behavior (like making or appreciating art) has evolved and is adaptive, one must say exactly what this behavior refers to, behaviorally (which means finding neurological and paleoarchaeological as well as observational evidence). A behavioral predisposition can originate, evolve, and be adaptive. A cluster of characteristics cannot [...] ³⁵.

The researcher from Seattle also pointed out the "Kantian bias" of the some of the criteria (especially "direct pleasure" and "intellectual challenge"), which prevents cluster approach from being regarded as a definition, because it does not encompass early art, including the prehistoric and ritual-related.

Very similar to Dissanayake's is one of the issues of Mohan Matthen's moderately critical analysis of *The Art Instinct* when he notes that the evolutionary account of art suggests a rather functionalist approach, possessing normative implications (e.g. genetic leashes define individual, culturally determined creativity), while the cluster definition, according to him, is selective and purely descriptive. In his opinion, Dutton's employment of cluster definition for the purposes of analyzing art from the evolutionary point of view is not so much wrong as pointless.³⁶

Contrary to the former, Roberto Casati' is not so gentle. In a quite one-sided review of *The Art Instinct*,³⁷ he notes that its author should arrange (sort) the proposed criteria according to some kind of hierarchy, otherwise the definition will be vague. He also alleges inconsistency on Dutton's part with regards to criterion (12), imaginative experience. He calls it a quasi-necessary condition. (12) is at times only one of the many criteria yet also becomes "one of the most important items on the list". This is fair criticism – if Dutton says the football game cannot be art because it does not satisfy (12), he clearly treats (12) as necessary for art status.³⁸

Another of Casati's objections concerns a normative bias of Dutton's position. According to the Italian philosopher, instead of describing art from an analytical perspective Dutton inseparably connects art with beauty, skill and pleasure. What about unpleasant or anti-artistic aesthetic objects, asks Casati. He talks outright about "trespassing of the line between description and prescription"³⁹ – this is an objection that appears in response to Dutton's strong rejection of smell as art-relevant category of appreciation.

However he put forward some fair criticism, in my opinion, Casati painstakingly points out Dutton's "non-analyticity", since he does not avoid normative statements himself (which takes away a little bit of credibility from his argument). When he is defending the institutional theory of art from Dutton's attacks he writes for example:

The proper claim is not that by exposing people to calendars or atonal melodies from their infancy they will end up liking those things. The proper claim is that liking or disliking certain artifacts is immaterial to their being or not being artworks.⁴⁰

I consider this as not convincing. Given the fact that both the "being" of Webern's and the "being" of Duchamp's artworks were revealed over the course of the last few generations, it's hard to argue, as Casati would suggest, that it makes them more representative examples of works of art than, for example, the Chauvet Cave paintings or the mammoth ivory figurine from Hohle Fels – if we take into account that later as a product of the human mind (and human skills) of tens of thousands of generations ago. Recognizing the former as representative works of art against the background of art history is at least as "prescriptive" as the claim that art is inseparably connected with beauty, skill and pleasure, if not more.

In Dutton's own response to the accusation of the normative bias, he states that he is "not trying to dictate people's reactions to art, to tell them what they ought to enjoy", but instead he wants "to describe and to some extent to explain, in terms of evolved preferences, the existence of that broad range of interests in the first place."⁴¹ This "broad range" seems to fulfill Dissanayake's broad definition of art in terms of "making special" or "artifying". As she possesses a broader concept of art than that presented by Davies, her criticism of Dutton's seems inappropriate. On the other hand, it is justified by the fact that this broader concept is more useful in the analysis of the evolutionary sources of art behaviors (not only the art as outcomes), which is also conceded by Davies.⁴²

Argument for "art as adaptation" and its adaptive value

Matthen's comment on Dutton recalls a certain academic inclination, which would require a sociological rather than analytical elaboration. Indeed, one gets the impression that in a somewhat artificial (breakneck) fashion Dutton moves from the "naturalistic definition of art" (but not in the biological sense)⁴³ to claims about aesthetic universals evolved in the Pleistocene-savannah mind of *Homo sapiens* (to some extent Dissanayake is inclined to do the same). Dutton's

“universalistic definition of art” – when it is treated as a kind of conclusive evidence for the universality of art itself, as an inherent bio-cultural phenomenon of the evolution of our species – unwittingly becomes the victim of a certain “functionalistic” logic. On the basis of Darwinian studies, the presence of this type of evidence (universal = evolutionary adaptive) is currently accepted as an almost decisive factor in favor of adaptive (or peri-adaptive) nature of the given phenomenon. It seems that Dutton, who considers himself an evolutionist, tries to use the concept of “aesthetic universals”⁴⁴ – which he originally used to draw attention to the pernicious influence, dominating in aesthetic discourse, of anti-universalistic tendencies⁴⁵ – to strengthen this theoretical construct of evolutionary humanists. He endeavors to demonstrate that art in its various forms brings measurable evolutionary benefit, both to our evolutionary ancestors and to us today; therefore, it is an adaptation in the biological sense. The problem with this type of argument is that with its help it is not difficult to prove a quite opposite theorem – for example, that features are universal (cross-cultural and cross-historical) because they are merely by-products of other, older evolutionary adaptations. Such features, though occurring universally, have not been selected by the process of natural selection, but emerged “in addition” to the fitness-enhancing cognitive abilities that assisted the survival and reproduction of our species. Although there is nothing insulting about the idea that art is “only” a spandrel (a by-product), most Darwinists (especially literary Darwinists) for some unclear reasons, consider it a point of honor to show that it is an adaptation.⁴⁶

Conclusion

The “folk concept” of art (Dutton, Kennick) as well as “ethological approach” (Dissanayake) was recently evoked by the “abilities view” of concepts (De Cruz and De Smedt), which is offered as a “cognitive” alternative to descriptive views of concept. This new cognitive approach to art is informed by empirical findings from developmental psychology, cognitive archeology, and philosophy of mind and it is not guided by borderline cases or problematic exceptions. According to this abilities view, “concepts are not definitions but abilities that are specific to cognitive agents.”⁴⁷ Abilities that typify behaviours related to art are: the design stance (the recognition of intentionality), symbol-mindedness (the realization that something represents something other than itself) and aesthetic sensitivity (the qualitative appreciation of perceptual stimuli), thus abilities that decidedly transcend the notion of art as an object and are directed towards art-related activities of the human mind.⁴⁸ Given this approach, possessing a notion of art does not require listing the properties of art, but rather being able to identify

specific examples (works of art) that fall within this concept. “The abilities view allows for concepts to be inarticulate and tacit.”⁴⁹

It seems that the above sketched direction of art studies, instead of taking the art objects as a starting point, focuses rather on what caused these objects to come into being, namely human cognitive faculties and behaviors that are responsible for the creation and enjoyment of these objects – is very likely to grow. Its importance consist in that it does not seek to separate art of different periods, including objects and performances from distant places and cultures, is not limited to the subject of art, and easily deals with borderline cases (such as ready-mades, folklore art, outsiders’ art, craft, sport, plagiarism). Will it break through to the global awareness of art scholars? Will exemplary criticism carried out elsewhere by Davies⁵⁰ towards Dissanayake’s too broad concept of art be regarded as unfounded? And will “ethological” turnabout in defining art under the influence of an evolutionary perspective emerge? Time will tell. It is only certain that there will always be some “resistant” individuals, who will heat up the discussion⁵¹. Not only among aestheticians.

Endnotes

1. This article is the aftermath of the discussion that took place on the panel on Stephen Davies’ book *The Artful Species*, on the 19th Jubilee International Congress of Aesthetics in Krakow, 2013. The panel was organized by the undersigned and included Wilfried Van Damme (art historian and anthropologist), Mohan Matthen (philosopher of biology), and Joseph Carroll (an English literature academic and founder of the movement known as literary Darwinism). Present contribution is inspired by (but not limited to) some of the controversies raised by the panelists.
2. D. Dutton, *Let’s Naturalize Aesthetics*, “Aesthetics Online”, website of The American Society for Aesthetics, edited by Dominic McIver Lopes (2004), http://www.aesthetics-online.org/articles/index.php?articles_id=19 – access: October 15th, 2014.
3. Ibid.
4. Ibid.
5. Ibid.
6. Cf. D. Dutton, *Aesthetics Universals*, [in:] *The Routledge Companion to Aesthetics*, ed. B. Gaut, D. M. Lopes, London: Routledge, 2001, pp. 210–212; idem, *A Naturalist Definition of Art*, “The Journal of Aesthetics and Art Criticism” 64:3 Summer 2006, pp. 367–377; idem, *The Art Instinct. Beauty, Pleasure and Human Evolution*, New York– Berlin –London: Bloomsbery Press, 2009.
7. D. Dutton, *The Art Instinct*..., p. 62.
8. Ibid., p. 51.
9. D. Dutton, *Let’s Naturalize Aesthetics*...

10. D. Dutton, *Aesthetics Universals...*
11. Davies writes: "The cluster account deserves to be taken seriously precisely because it provides a plausible description of what kinds of things can make something art. Rather than counting against essentialism in aesthetics, it indicates another way for essentialism to be true", S. Davies, *The Cluster Theory of Art*, "British Journal of Aesthetics", 44 (2004), p. 300.
12. S. Davies, *The Artful Species*, Oxford: Oxford University Press, 2012, p. 28.
13. Davies writes: „something is art (a) if it falls under any established, publicly recognized category of art or within an established art tradition or (b) if it is intended by its maker/presenter to be art and its maker/presenter does what necessary and appropriate to realizing that intention, or (3) if it shows excellence of skill and achievement in realizing significant aesthetic or artistic goals" – S. Davies, *The Artful Species*, pp. 28–29.
14. S. Davies, *The Artful Species*, pp. 28–29.
15. Cf. S.L. Feagin, *Review of The Artful Species*, "The Journal of Aesthetics and Art Criticism", 72:2, Spring 2014, p. 205.
16. J. De Smedt, *Common Minds, Uncommon Thoughts: a Philosophical Anthropological Investigation of Uniquely Human Creative Behavior, with an Emphasis on Artistic Ability, Religious Reflection, and Scientific Study*, doctoral dissertation, Universiteit Ghent 2011, p. 125.
17. D. Dutton, *The Art Instinct...*
18. D. Dutton, *The Art Instinct...*, p. 51.
19. "We are talking here about the nature of art. My claim is that the arts constitute a natural category of human experience and production that existed long before art theorists." – D. Dutton, *The Art Instinct: Denis Dutton replies to Roberto Casati*, "Cognition and Culture" 2009, <http://www.cognitionandculture.net/home/blog/39-robertos-blog/454-the-art-instinct--denis-dutton-replies-to-roberto-casati>, – access: October 15th, 2014.
20. S. Davies, *The Artful Species*, p. 29; see also endnote 11.
21. W.E. Kennick, *Does Traditional Aesthetics Rest on a Mistake?*, "Mind" no. 67, 1958, pp. 317–334; see also S. Davies, *Definitions of Art*, Ithaca: Cornell University Press 1991, pp. 4, 7–9.
22. For example: although he criticizes Dissanayake's concept of art as too broad, he doesn't put forward anything instead.
23. E. Dissanayake, *Homo Aestheticus: Where Art Comes From and Why*, Seattle: University of Washington Press, 1995; idem, *The Artification Hypothesis and its Relevance to Cognitive Science*, "Evolutionary Aesthetics, and Neuroaesthetics" – "Special Issue on Aesthetic Cognition. Cognitive Semiotics" no. 5, 2009, pp. 148–173.
24. S. Davies, *Ellen Dissanayake's Evolutionary Aesthetics*, "Biology and Philosophy" no. 20, 2005, pp. 291–304; idem, *The Artful Species*.
25. S. Davies, *The Artful Species*, p. 131.
26. E. Dissanayake, *What is Art?*, Seattle: University of Washington Press, 1988, pp. 67, 71.

From *The Art Instinct* to *The Artful Species*...

27. I made a comment on this discussion in: J. Luty, *Is an Analytical Concept of Art Adequate for Evolutionary Explanations? A Comment on Stephen Davies's The Artful Species*, "Estetika: The Central European Journal of Aesthetics", LI/VII, 2014, no. 1, pp. 121–25.
28. S. Davies, *Music, Fire, and Evolution*, "Politics and Culture" no. 1, 2010, <http://www.politicsandculture.org/2010/04/29/music-fire-and-evolution/> – access: October 15th, 2014.
29. S. Davies, *The Artful Species*, pp. 152–157.
30. However he prefers to use its narrow version: "art behavior" – S. Davies, *The Artful Species*, pp. 7, 46, 49–54.
31. E. Dissanayake, *The Artful Species Engages in Art Behaviours*, "Estetika: The Central European Journal of Aesthetics", LI/VII, 2014, No. 1, pp. 101–104.
32. E. Dissanayake, *Denis Dutton: Appreciation of the Man and Discussion of the Work*, "Philosophy and Literature", vol. 38, no. 1A, October 2014, pp. A26–A40.
33. They write that abilities that "typify behaviours related to art (...) include the design stance (the recognition of intentionality), symbol-mindedness (the realization that something represents something other than itself) and aesthetic sensitivity (the qualitative appreciation of perceptual stimuli), and thus abilities that decidedly transcend the notion of art as an object and are directed towards art-related activities of the human mind" (J. De Smedt, H. De Cruz, *A Cognitive Approach to the Earliest Art*, "Journal of Aesthetics and Art Criticism" 69, 2011, p. 381).
34. See: E. Dissanayake, *What is Art For?*, Seattle: University of Washington Press, 1988, p. 39.
35. E. Dissanayake, *Denis Dutton: Appreciation of the Man...*, p. 31.
36. M. Matthen, *Art, Sexual Selection, Group Selection: Critical Notice of The Art Instinct*, "Canadian Journal of Philosophy" no. 41, 2011, pp. 337–56.
37. R. Casati, *Book review: The Art Instinct by Denis Dutton*, "Cognition and Culture", <http://www.cognitionandculture.net/home/blog/39-robertos-blog/446-book-review-the-art-instinct-by-denis-dutton> – access: October 15th, 2014.
38. However Dutton, refuting Casati's objections, lists the differences between genres with regards to art: "Different works and different genres exploit some items of the list more than others. Novels and landscape paintings us make use of representation more than instrumental music, but are not for that reason superior art forms. Let readers meditate on the list and form their own hierarchies." And he adds that his "guess is that virtuosity and imagination will be high in most people's thinking about art" – D. Dutton, *The Art Instinct: Denis Dutton replies to Roberto Casati*, "Cognition and Culture", <http://www.cognitionandculture.net/home/blog/39-robertos-blog/454-the-art-instinct--denis-dutton-replies-to-roberto-casati>, access: October 15th, 2014.
39. R. Casati, *Book review: The Art Instinct...*
40. *Ibid.*
41. D. Dutton, *The Art Instinct: Denis Dutton replies to Roberto Casati*.
42. S. Davies, *Ellen Dissanayake's Evolutionary Aesthetic*, "Biology and Philosophy" no. 20, 2005, pp. 291–304.

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43. D. Dutton, *A Naturalist Definition of Art*, "The Journal of Aesthetics and Art Criticism" 64:3, Summer 2006, p. 368.
44. D. Dutton, *Aesthetics Universals...*; idem, *The Art Instinct...*
45. D. Dutton, *The Art Instinct...*, pp. 48–50.
46. Cf. S. Davies, *The Artful Species*, pp. 121–122.
47. J. De Smedt, *Common Minds, Uncommon Thoughts...*, p. 183
48. Cf. *ibid.*, p. 184.
49. *Ibid.*
50. S. Davies, *Ellen Dissanayake's Evolutionary Aesthetics*.
51. The panel session on Stephen Davies' *The Artful Species: Aesthetics, Art, and Evolution* gave rise to some controversy. The panel speaker – literary scholar Joseph Carroll, known as the founder and leading practitioner of movement called literary Darwinism – put rather hostile and academically inappropriate criticism of Davies' approach that have had some far-reaching repercussions; see: Carroll's account: *A Critique of Stephen Davies's The Artful Species*, "Estetika: The Central European Journal of Aesthetics", LI/VII, no. 1, 2014, pp. 105–110; Davies' own view on this event: <https://artfulspecies.wordpress.com/2013/08/01/the-artful-species-roasted/> – access: October 15th, 2014. It only shows that evolutionary turn in aesthetics is still considered as a controversial issue (even among those who accept some of its fundamental assumptions).

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Traditions in the Czech Aesthetics of Nature: Between Biology and Philosophy

The relations between nature and aesthetics and between science and aesthetics were widely discussed at the Krakow IAA congress, for example, in discussions about Stephen Davies's evolutionary aesthetics. This article aims to offer a view on the history of these themes while focusing on central Europe, particularly aesthetics in Bohemia, where the traditions of the German and the Slavic cultures met. (In the 19th century, for the first time, as we will see, the work of a Czech-German author, born in Moravia, could be written in German in Cracow, part of the Austro-Hungarian Empire, and published in a neighbouring state, Saxony.) This "regional" point of view has interesting aspects, because the connection between Nature and Aesthetics (and Science, as the sections at the conference were titled) has a long tradition in Czech aesthetics, going back to the early 19th century, and is connected with the outstanding figures in the field. It is fair to say that this was one of the main topics of Czech aesthetics, mostly in the second half of the 19th century and the beginning of the twentieth century (and then again at the beginning of the 21st century).¹ In this sense, it is reasonable to see the earlier Czech aesthetic tradition as a laboratory of various current streams in aesthetics and dealing with nature and science – which are such current topics.

From the very beginning, there have been two basic currents of thought inspiring interest in the beauty of nature: one has worked in aesthetics while based on contemporaneous streams in philosophy (for example, Herbartism and Hegelianism), for example, forestry. The most interesting topic, I believe, but also one full of misunderstandings, was the strong orientation of the first two Czech aesthetics professors to Darwin. In the Czech history of science, they are even considered the first and main two propagators of Darwinism in the Bohemian Lands. I therefore offer here a historical supplement to current thinking about

evolutionary aesthetics, and suggest some connections between aesthetics and biology in general.

But we shall also consider some other noteworthy attempts to explore the aesthetics of nature. In this article I shall primarily sketch out this history not as a long list of names, most of which are sure to seem obscure to the reader, and concepts written in a strange language (though some of the works are in German). My goal is more to act as a guide to various ways of looking at the field of the aesthetics of nature and how it seeks to use biology or modern science in general. I hope also to remind the reader, in passing, that in this region of the Austro-Hungarian Empire (in which Krakow University played a typical and important role), the Slavic nations and languages were in a nationalist competition with the German.

But first, we shall look at some of the links between aesthetics and biology. I would first turn your attention to the earliest works dedicated to the aesthetics of nature which are not based on science. In his *Aesthetic Theory* (written between 1961 and 1969, and published in 1970), Theodor Adorno argues that the end of natural beauty, or at least the waning of interest in it, is connected with Hegel's aesthetics and the "ravages of idealism" (including, naturally, the concepts of freedom and human dignity, which were inaugurated by Kant and then transplanted into aesthetics by Schiller and Hegel²). The experience of natural beauty was therefore a characteristic of modern European culture, but scholars had almost no interest in the topic. I definitely do not want to argue with Adorno, but it is a bit unfair of him not to mention the influential Hegelian thinker Friedrich Theodor Vischer (1807–1887), who devoted a whole volume of his six-volume *Aesthetik oder Wissenschaft des Schönen* (Aesthetics, or the science of beauty, 1844–57), to the aesthetics of nature (vol. 2, 1847).³ In the Bohemian Lands too there have been other Hegelians with a theoretical interest in the aesthetics of nature.

In this respect, one must recall two Augustinian monks from Brno, Moravia, colleagues of the founder of modern thinking about heredity, Gregor Mendel (1822–1884). The first of them was František Tomáš Bratráněk (1815–1884), a philosopher and Professor of German Literature, and, later, the vice-chancellor of the Jagiellonian University and the dean of its Faculty of Arts. He discusses the aesthetics of nature in two works, both written in German. In the first, *Zur Entwicklung des Schönheitsbegriffs* (On the development of the concept of the beautiful, 1841)⁴, the beauty of nature, following Hegel's thinking, is something lower than the beauty of works of art, because only human works are works of Spirit. Although he devotes comparatively many passages here to the beauty of nature and to the sublime, Bratráněk warns against having a simplistic liking

for nature or for the consolation provided by nature rather than a liking for Spirit. But paradoxically, and regardless of his warning, twelve years later, like the Cracow professor, Bratránek published a 400-page book entitled *Beitrag zu einer Aesthetik der Pflanzenwelt* (A contribution to the aesthetics of the plant world, 1853).⁵

In this work, strongly influenced not only by Hegel and Vischer, but also by Goethe and the German Romantics and scientists, Bratránek tries to explain the changes in man's attitude towards nature. Nature, he argues, serves man to express his innermost being, not simply as a mirror, but also as a catalyst to the development of the human spirit. The beauty of nature – plants, in Bratránek's example – opens the way to ourselves and teaches us conscious perception, which also changes our perception of works of art. This particular work by Bratránek uses very dense German and covers many ideas. Consequently, I can provide only a rough synopsis: Bratránek analyses various types or levels of the perception of nature, beginning with, in contemporary words, the stage of animism. The peak, for him, is in contemporary culture, mostly in the symbolic understanding of nature in poetry and landscape painting. But the highest level, he argues, is a park or an ornamental garden. Here, living nature is completely penetrated by the human spirit; it is not merely "cultivated wildness"; it is therefore an "expression of humanity".⁶

This work was, as far as I can tell, little known in Czech- and German-speaking Austria. It may have been better known in the German lands after it was reviewed by Vischer and was later mentioned appreciatively by Heinrich von Salisch (1846–1920), a founder of Forest Aesthetics.⁷ The second of the Moravian monks I wish to consider, the eccentric František Matouš Klácel (1808–1882), discusses the beauty of nature in his charmingly entitled work *Průklest ku Ladovědě* (Clearing a path to aesthetics, 1868–69), which was, however, never published in its entirety.⁸ Although this work is strongly influenced by Hegel, Klácel expresses his preference here for the beauty of nature and the universe as a whole. Like Bratránek, Klácel in this work also manifests a deep interest in nature and the natural sciences. (One sees in particular the influence of Alexander von Humboldt). Interestingly, Klácel was a colleague of Mendel. Like Mendel, Klácel too conducted experiments using peas and heredity,⁹ but his chief aim was to discover the laws of the universe as a whole and he did not see laws as particularly as his famous follower did. In comparison with positivist contemporary science based on facts and measurement, Klácel's approach was a more Romanticist endeavour to combine science and art.

Two Czech professors at Prague, Durdík and Hostinský, also dealt with this topic. They were followers of Johann Friedrich Herbart (1776–1841), the

central figure of officially sanctioned philosophy in Austro-Hungary (Herbart's teachings were incorporated into aesthetics by means of the German writings of the Prague Professor Robert Zimmermann¹⁰). Both Durdík and Hostinský can reasonably be considered the first and most active promoters of Darwinism in the Bohemian Lands. They provide us with examples of the parallel interest in the aesthetics of nature and in science, mostly biology. But both of them are also examples of the different approaches to considering this connection.

Josef Durdík (1837–1902), the elder of the two, was trained not only in philosophy but also in the sciences. He is an excellent example of someone who perceived the fundamental division between aesthetics and science. On the one hand, he enthusiastically promoted Darwinism, which in those days was, unlike in Germany, quite unpopular in Austro-Hungary. He was struggling with the Church as well as with many scholars and artists. He also wrote articles on contemporary science, mostly astronomy and Darwinism. He was, moreover, the only Czech to have ever met Darwin personally.¹¹ And he also wrote one of the first books in Czech about the need for the conservation of nature, *Pozor na lesy!* (Be aware of the forests!, 1873).¹² He linked this need with a warning about the current real danger of floods. Later he published a book about Kant and Darwin.¹³ Nevertheless, he strictly divided the field of science from the field of aesthetics. Our aesthetic judgement, as well as ethics, is, Durdík argued, independent of our biology and of biological and other scientific discoveries.¹⁴ In his 600-page *Všeobecná estetika* (General aesthetics, 1875),¹⁵ Durdík mentions Darwin only occasionally and makes no attempt to work with biological theories. Durdík is a clear example of a scholar who believes there is a real gap between nature and nurture, between science and the humanities. His approach is, I believe, partly based on his emphasis on Darwin's theory of natural selection and the concept of the struggle for life, completely ignoring his theory of sexual selection. Today, sexual selection is firmly a part of the theory of natural selection, but in Durdík's day it was not, nor was it for Darwin. Durdík found Darwin interesting as the creator of a new paradigm of biology, but he completely passed over his tendency to see things as a "sociobiologist", interpreting human culture from the biological point of view.¹⁶

The ideas of Durdík's younger colleague, Otakar Hostinský (1847–1910), were just the opposite. Hostinský was a professor of aesthetics and a music theorist. (Aesthetics throughout the Austro-Hungarian Empire was an independent department.) His ideas, I believe, would today be enthusiastically welcomed, for example, by environmental aestheticians such as Allen Carlson and, perhaps to a lesser extent Denis Dutton and Ellen Dissanayake.

Not only was Hostinský one of the chief proponents of Darwinism in the Bohemian Lands, but he was also under Haeckel's influence, as we know from Hostinský's wife.¹⁷ Nevertheless, of the two scientists, he quoted only Darwin in his written work. Whereas Durdík proposed Darwin's evolutionary theory as a new paradigm in biology, Hostinský considered Darwin's struggle for life to be a basic principle of the world. He therefore attempted to apply the theory of natural selection to how man understands art. Hostinský's attempt to apply Darwinism to cultural evolution was provocative and revolutionary in Czech society. He caused a scandal with his first lecture on the topic in 1873. That same year, four years even before Grant Allen's *Physiological Aesthetics* (1877), he published a lecture entitled *Darwin and Drama* (1873).¹⁸ In this essay, Hostinský argues that the laws of nature apply also to human society; and, he continues, if we apply the same laws to humans as animals, we must, in order to contemplate art, take biology, specifically the evolutionary theory of natural selection, as our starting point. In contrast with Durdík, however, Hostinský refers to another Darwinian principle as well – sexual selection. The struggle for life and sexual selection are therefore the two laws or principles governing all human life. And Hostinský endeavours to explore these two principles as the basic stuff of art (that is to say, what art is about). Art is not about mankind's struggle against nature, of course, but about the struggle of individual people, families, and nations against each other. For Darwin, unlike for neo-Darwinists, the unit of selection was the species, not the individual. According to Hostinský, sexual selection appears as love in its exalted human form. The struggle for life appears as an attempt at self-preservation and self-realization and also selfishness, but without the pejorative meaning.

Naturally, when Darwin's ideas of evolution become the subject or theme of art, they must, argues Hostinský, be individualized; something characteristic of the individual and the species must be found. A represented horse or human being must embody a type, that is, must appear as a characteristic member of its species, with manifest traits that indicate its difference from the other species. (Though this is Aristotle's idea, Hostinský does not mention him.)

The most clear-cut example of Hostinský's efforts to reinterpret Darwin's principle of the struggle for life in human culture was his paper *Dissonance*,¹⁹ published one year after *Darwin and Drama*. Here he endeavours to demonstrate that the term "struggle for life" is essentially a synonym for the term "dissonance" used in music theory. Both involve conflict and contrast, principles necessary not only in art and aesthetics, but also in life. For Hostinský, the harmony that satisfies the listener arises only from resolving the dissonance and the contrast, even in life when disharmony disrupts tranquillity or peace. An aesthetic perspective

can make something good of the dissonance that seems so bad and naturally accompanies the struggle for survival. This is because an aesthetic perspective compels our imagination to resolve the dissonances as an artist does in his or her work. Hostinský convincingly argues that evil serves good as dissonance serves harmony – but we no longer need a religious explanation.²⁰ From the point of view of an individual life, evil suffering, and disharmony, is part of its evolution, its improvement from the perspective of the species, and part of the passage from dissonance to the highest harmony.

The difference between Hostinský and Darwin is, however, in their opinions about the origins of art and aesthetic perception among all animals. Hostinský deals with the topic in the essay *O původu umění* (On the origin of art, 1894).²¹ Whereas for Darwin the sense of beauty was already present in animals and the difference between their sense of it and ours was just a matter of degree, Hostinský regarded the difference to be categorical, and considered Darwin's view on this to be an act of impermissible anthropomorphizing. So Hostinský tends to apply Darwin's laws to human culture, but is sceptical about considering the boundaries between humans and animals to be ill-defined.

But Hostinský had another interest which also merits our consideration. He often mentions the “aesthetic attitude towards nature”, and discusses it in many essays, for example, when he writes about Romanticism or the concept of the picturesque. The most important essay for our topic is *Umění a příroda v estetické výchově* (Art and nature in aesthetic education, 1907),²² where it is fair to see him as a forerunner of environmental aestheticians. He argues here for a distinctive attitude towards nature, not one simply transferable to an attitude towards art. The contemporary teaching practice and theory of looking at the landscape and at nature as a work of art (for example, Durdík's recommendation to look at the landscape through a frame) he considers to be completely wrong. It is as if we were reading the argumentation of Ronald Hepburn or Carlson: in comparison with human work, nature is a single entity and “the correct view should point towards its whole [...], nature itself is not dismembered on precisely framed pictures; nature knows neither frames, nor pedestals.”²³ He thus also anticipates Carlson's landscape and object models. “Nature should be viewed from its own, special viewpoint,” he argues, “as nature, when it would be the cause of the keenest aesthetic appreciation.”²⁴

Hostinský also emphasizes the need to be inside nature, like staffage in a landscape. (One recalls Hepburn's remarks that in nature we are not only a viewer, but also an actor.) In nature there is no single or proper angle of vision; we need to experience the forest by moving through its interiors. Interestingly, Hostinský points to the same “solution” as Carlson – that is, we need the natural sciences,

for they help us to achieve a full understanding and appreciation of the “organic beauty” of flowers, trees, and so forth. Theories of the highest level also help us to appreciate nature, as does the theory of natural selection. But not only aestheticians were interested in the aesthetics of nature; scholars and students of biology and forestry, which were accepted fields of study in the Bohemian Lands, also contemplated the field. And their way of thinking fills the gap between Hostinský’s and Durdík’s work and the interest in the aesthetics of nature among Czech aestheticians in the late twentieth and early twenty-first centuries.

But back to biology. Darwinism was not the only influence on aesthetics; other streams in biology, mostly originating with German scientists, were also making themselves felt. In this area, there was a long tradition of thinking about the aesthetic phenomena of nature. It includes not only the ideas of Goethe and Haeckel, but also, for example, of Ernst Haeckel (1831–1904) and Karl Möbius (1825–1908), and, later, the influential Jacob Johann von Uexküll (1864–1944). Despite the popular misconception, Darwinism was not some sort of governing paradigm at that time. Just the opposite – at the end of the nineteenth century it was considered a questionable and weak stream among evolutionary theories. The theory of natural selection was generally accepted, but only as one of many ways in which evolution works. Until the rediscovery of Mendel’s principles of heredity in about 1900, and the neo-Darwinian new synthesis that followed in the 1930s, Lamarckism and various kinds of vitalism were still alive and well.

It was in this “poly-paradigmatic” atmosphere that Josef Velenovský (1858–1949), professor of Botany at Prague, published his works. One of the leading Czech botanists of his day, Velenovský, in his fundamental scientific work *Všeobecná botanika* (General botany, 1905–10), his essays *Obrázky* (Pictures, 1928), and his *Přírodní filosofie* (Philosophy of Nature, 1921–22),²⁵ considers diverse evolutionary principles, including natural selection, sexual selection, and **the inheritance of acquired characteristics**. One of his most appreciated ideas was the aesthetic or ornamental principle. For him, shapes and colours in animals and plants are not merely a result of use, but are really an independent tendency to the beautiful form of nature. Matter itself – in Velenovský’s vitalistic view – has this tendency. And we can see it precisely in the forms of the *Radiolarians* and fungi, which are ornamental and beautiful for no purpose; they are beautiful even without a percipient that would select them.

Velenovský was quite popular in his day and he is still well known amongst Czech botanists. His influence is strongly perceivable also in the “turn” of Karel Zítko (1874–1926), a physician and university-educated philosopher. In 1917 he wrote a book²⁶ about the aesthetics of nature, based on the sciences, with an accent on the physiology of perception and Darwinism. A few years after

World War I, however, he published another book²⁷ on the topic, in which he interprets aesthetic phenomena in nature as a result of the life force in matter, the vital energy, with the strong ornamental potential mentioned by Velenovský.

A completely different approach resulted from the influence of the writings of the German forester, statesman, and member of the German parliament, Heinrich von Salisch (1846–1920). This Polish-born landowner wrote his *Forstästhetik*, (*Forest Aesthetics*, 1885)²⁸ as a practical aid in forestry, connecting land use with aesthetic quality. His ideas were based on Goethe, Schiller, Vischer, and the English priest-artist William Gilpin (1724–1804). But he offers mostly a system of recommendations for foresters about how to grow a beautiful forest and partly on the appreciation of various sorts of wood, combinations of tree species, underbrush, and so forth. This work was quite popular; forest aesthetics was even included in the *Staatsexamen* in forestry in Hessen. It also had many followers in the Bohemian Lands,²⁹ indeed throughout Austro-Hungary. Still in the 1950s and 1960s, there was a Czech textbook for students of forestry with about 50 pages on the aesthetics of the forest.³⁰ To this day, in fact, Czech students of forestry learn about forest aesthetics at specialized secondary schools.

But the real gap in the interest in the aesthetics of nature came after this period. In biology, Lysenkoism, a strange belief in **the inheritance of acquired characteristics** and direct “leaps” between species, was predominant in the Eastern Bloc until the early 1960s. So neither Darwinists nor any alternative German influences – discredited worldwide after the Third Reich – were permitted in Bohemia. Interest in the aesthetics of nature vanished from academic aesthetics around the world as early as the 1920s. Neither structuralists, like Mukařovský and Jacobson, nor Marxists, who dominated aesthetics in the Bohemia and Moravia, had any interest in the beauty of nature.

The curious change in this attitude in Czechoslovakia in the 1980s was not a result of the influence of Hepburn, Carlson, Adorno, or Roger Caillois, or the work of Darwinist biologists, for example, Jay Appleton’s *Experience of Landscape* (1975). It came about instead because of the work of the Swiss biologist, friend of Carl Gustav Jung, and Vice-Chancellor of Basel University, Adolf Portmann (1897–1982).³¹ In Czechoslovakia, Portmann was discovered by political dissidents (that is, people no longer part of the establishment). A Czech translation of his work was typewritten as samizdat by Olga Havlová (1933–1996), the wife of the future president, Václav Havel (1936–2011), and circulated in a couple of copies among dissidents and non-dissident biologists. Portmann tried to find a way out of the neo-Darwinian point of view which was strictly focused on usefulness and adaptation. He accentuated not the inside of living beings, but their exteriors as ruled by their own independent laws, tending to

aesthetic well-marked structures and self-presentation as one of the main goals, much like Velenovský's ornamental principle. Initially, Portmann's teaching spread without state approval in the 1980s. Then, after the Velvet Revolution in late 1989, it took hold even in the Prague academic world. It is even fair to talk about something like a Prague school of Portmannism at the Faculty of Science in Prague.³² It was from the presentation and promotion of Portmann's ideas that the next generation of young biologists came. They have tried to apply Portmann's ideas to experimental biology as well – and they have published articles even in international journals, based on this “biological aesthetics”, mostly in connection with mimicry.³³

The interest of biologists in the aesthetics of nature therefore also inspired Czech aestheticians who may not have been interested primarily in biology. But we Czech aestheticians, I should say, were looking mostly at other areas in the aesthetics of nature. I myself studied aesthetics and art theory, and also the history and theory of sciences at the Faculty of Science; but I am more concerned with the history of the aesthetic appreciation of nature and also the Darwinist interpretation of the beauty of nature. And most of my Czech colleagues are today more interested in Anglo-Saxon environmental aesthetics than in earlier German biology. So it seems that alternatives or different paths, written in an obscure language that only a few native speakers or Slav scholars understand, are a thing of the past. We have, for seven years now, held national conferences on the aesthetics of nature,³⁴ but, with the exception of the first two years, they have had no connection to Portmannist “biological aesthetics”. What is most important is that the aesthetics of nature, nature itself, and aesthetics constitute not only a fascinating field for contemporary thinkers – as I hope to have shown here –, but also an interesting field for the study of the history of aesthetics and the history and theory of science.

Acknowledgements

I thank Derek Paton for helpful comments and the translation.

Endnotes

1. But it was also an important topic for Anton Müller (1792–1843), who gave lectures on aesthetics (in those days called the *Schönnewissenschaften*, Science of Beauty) at Prague from 1823 to 1842. Unfortunately they have remained unpublished.
2. T.W. Adorno, *Aesthetic Theory*, trans. R. Hullot-Kentor, London: Athlone, 1997, p. 62.
3. F.T. Vischer, *Aesthetik oder Wissenschaft des Schönen* II, Reutlingen: Mäckens, 1847.

4. F.T. Bratránek, *Zur Entwicklung des Schönheitsbegriffes*, Brno: R. Rohrer, 1841.
5. Idem, *Beitrage zu einer Aesthetik der Pflanzenwelt*, Leipzig: Brockhaus, 1853.
6. Ibid., p. 438.
7. H. von Salisch, *Forstästhetik*, Berlin: J. Springer, 1911, pp. 76–78.
8. F.M. Klácel, *Průklest ku Ladovědě v listech jež psal vzdělaně panně F. M. Klácel*, Moravian Provincial Archives, manuscript G48, 1869.
9. M.H. Peaslee and Vítězslav Orel, *The Evolutionary Ideas of F.M. (Ladimir) Klacel, Teacher of Gregor Mendel*, “Biomed Pap Med Fac Univ Palacky Olomouc Czech Repub.”, 151(1), 2007, pp. 151–5.
10. R. Zimmermann, *Allgemeine Ästhetik als Formwissenschaft*, Vienna: Braumüller, 1865.
11. J. Durdík, *Návštěva u Darwina* (A visit to Darwin), “Osvěta”, 10, 1876, pp. 717–27.
12. Idem, *Pozor na lesy!*, Prague: J. Otto, 1873.
13. Idem, *Darwin und Kant*, Prague: J. Papírník, 1909.
14. See J. Durdík, *Darwinismus a mravouka* (Darwinism and ethics), “Paedagogium”, 1, 1883, pp. 1–9.
15. Idem, *Všeobecná aesthetika*, Prague: Kober, 1875.
16. See also idem, *Darwin* (Feuilleton), “Politik”, 3, 1873, pp. 1–2; *O učení Darwinově* (On Darwin’s teaching), “Osvěta”, 1, 1871, pp. 45–46; *O nauce Darwinově* (On Darwin’s science), [in:] idem, *O pokroku přírodních věd: Populární výklady Dra. J. Durdíka*, Prague: Vanity press, 1874, pp. 219–33.
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18. O. Hostinský, *Darwin a drama*, “Lumír” 1, 1873, pp. 311–314; Published in English as *Darwin and Drama*, trans. D. and M. Paton, “Estetika: The Central European Journal of Aesthetics”, 50, 2013, pp. 101–111.
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21. O. Hostinský, *O původu umění* (On the origins of art), [in:] idem, *Čtyři rozpravy* (Four discourses), Prague: F. Šimáček, 1894.
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26. K. Zítka, *Aestetika přírody* (Aesthetics of nature), Klatovy: Höschl, 1917.
27. Idem, *O záhadách a tajemstvích živé hmoty*, [in:] idem, *O znameních předtuchách, instinktech a pudech a O záhadách a tajemstvích živé hmoty*, Prague: Sfinx, 1921, pp. 33–66.

Traditions in the Czech Aesthetics of Nature...

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29. For example, J. Strachota, *Estetika lesa* (Aesthetics of the forest), Prague: Česká lesnická jednota, 1914.
30. Š. Korpel, *Estetika lesa*, [in:] *Pěstění lesů III*, ed. B. Polanský et al., Prague: SZN, 1956, pp. 260–314.
31. A. Portmann, *Neue Wege der Biologie*, Munch: Piper, 1961.
32. See K. Stibral, *Český portmanismus – Mystici z Viničné* (Czech Portmannism: The mystics from Viničná street), [in:] K. Stibral, O. Dadejík, and V. Zuska, *Česká estetika přírody ve středoevropském kontextu*, Prague: Dokořán, 2009, pp. 250–264.
33. See, for example, K. Kleisner, *The Semantic Morphology of Adolf Portmann: A Starting Point for Biosemiotics of Organic Form?*, “Biosemiotics”, 1, 2008, pp. 207–219.
34. The conferences were called “Krása-krajina-příroda” (Beauty–landscape–nature) I–VII, Prague, 2007– 2013.

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On Birds, Beasts and Human Beings. An Approach to the Continuity between Art and Life

“Those who cannot feel the littleness of great things in themselves are apt to overlook the greatness of little things in others.”¹

Kakuzo Okakura, *Book of Tea*

In 1934 John Dewey laid the foundation of a Philosophy of Art which had its roots in the essential conditions of life, that is, the basic vital functions which human beings share with birds and beasts. Dewey asserted that at every moment living creatures are exposed to conflicts from their surroundings, and at every moment they try to restore the harmony, to satisfy their needs. Fifty four years after, Ben-Ami Scharfstein published his book *Of Birds, Beasts and other Artists* (1988) in which he tries to show the universality of the art instinct in humans, animals and birds. He returns to the biological background of art and explains how human beings and other animals are pushed to self-expression by their personal and social needs. Although he recognizes the explicit expressive behaviour of human beings, he also indicates that if we want to understand our nature and the art we create, we will not deny these biological roots. The aim of this paper is to examine that continuity between art and life from a comparative approach to the views of these authors. In this sense, this paper explores two main points: the naturalistic background of aesthetics and the functionality of art such as manifestation of a culture.

I. The naturalistic background of aesthetics

The proposal of naturalistic background recovers the continuity of aesthetic experience or aesthetic process with normal processes of living. Western tradition has sharply distinguished art from real life and remitted it to a separate realm

such as museums, galleries, theatres or concert halls; in contrast, this naturalism has been addressed from a different starting point. Therefore, I begin drawing a comparison between the Deweyan naturalistic humanism and Scharfstein's biological thesis. Both authors root aesthetics in our biological nature and emphasize how important the natural context is to develop aesthetic experiences. However, they present differences in their epistemological elaborations due to their different aims: Dewey's task was "to restore the continuity between the refined and intensified forms of experience that are works of art and everyday events, doings and sufferings that are universally recognized to constitute experience;"² whereas Scharfstein's aim was to find an aesthetic universal, that is, what is common to art, what is common to mankind.

Dewey starts *Art as Experience* criticizing the aesthetic theory which has separated the existence of the works of art as products that exist apart from human experience. Artistic objects have been separated from both conditions of origin and operation in experience and have been set in a remote pedestal, "a wall is built around them that renders almost opaque their general significance, with which aesthetic theory deals."³ Thus, in the first chapter, called "The Live Creature," Dewey gives the biological and anthropological fundamentals to place aesthetics in life, a life that "goes on in an environment, not merely in it because of it, through interaction with it."⁴ All art, as Dewey understands it, is the product of interaction between living organisms and their environment, that is to say, is the product of having an experience.

Similarly, Scharfstein proposes art as a product of this interaction. Both authors share the belief that our environment has an aesthetic dimension; this "biological-sociological commonplace" or "biological-sociological nature" which makes possible our most distinctively human accomplishments, "joining the animals in us with the human in its most imaginative, concentrated, powerful and subtle expressions."⁵ Scharfstein illustrates this point with examples of artlike activities of three different creatures (birds, apes, and children) in the second chapter, called *Prehuman Intimations*. In these pages, I focus on birds, and particularly on birdsongs, because we can find Scharfstein's biological thesis in this point.⁶ Despite the differences between birds and human beings, Scharfstein draws analogies, which give us his biological-sociological basis for art:

(1) Firstly, he proposes birdsongs and human art as a way in which the individual self is made external. Both reflect its entire being and make possible an accurate, deep form of communication.⁷ Likewise, Dewey's notion of experience implies participation and communication. He explains how art and its objects communicate and are expressive of human experiences, and emphasises the role of art as "the only media of complete and unhindered communication be-

tween man and man that can occur in a world full of gulfs and walls.”⁸ However, Dewey does not say that communication with others is the intent of an artist, but a feature of experience.

(2) Secondly, Scharfstein suggests art as a way to produce a rhythmically organized pattern. Birds, like human beings, produce and are attracted to organized sounds, that grow out of a repertoire of complicated phrases and require a relatively high degree of organization.⁹ Dewey also introduces the organization as a fundamental feature of experiences, but, in contrast to Scharfstein, Dewey puts emphasis on change. Although Scharfstein asserts that the occasions evoke distinctive song-variants or kind of art, he does not pay attention to that variable context which generates new organizations. For Dewey, life is a process of interacting and interchanging through which man dynamically organises his environment.

(3) Thirdly, Scharfstein asserts that art can be a way to establish intimacy, because it identifies the individual both by general kindness and particular inwardness. Art, as birdsongs, creates a dialogue between individuals that is personally and emotionally exact and develops their intimacy.¹⁰ In this way, Dewey talks about intimacy too, but he explains how this brings about the form. Objects are arranged and adapted to serve the enrichment of the immediate experience, to take on an aesthetic form. This mode of composition or arrangement holds the parts together and establishes meaning and continuity in our lives.¹¹ Therefore, whereas Scharfstein presents this intimacy by means of examples of the lover’s nature of the poet or war songs, Dewey dedicates some chapters to the nature of the form, through which we carry our experience to consummation.

(4) Fourthly, Scharfstein proposes art as a way to create a pattern of challenge and response, a sort of competition for the sake of cooperation and cooperation for competition. As a human analogy he gives the example of African drummers playing against one another, the duel between Mozart and Clementi or Japanese, Sanskrit and Chinese poets engaged in improvised verse-capping or verse-completion contests.¹² In contrast, Dewey does not talk about art as a sort of competition. He considers that response due to the rhythm and the continual variation, due to the immediate richness of the whole which provides the conditions for new stimulations of new responses upon every subsequent approach. Both authors seems to share the notion of creative response for variety and the notion of organic demand, though Dewey pays more attention to define fundamental ideas such as rhythm and form, and Scharfstein emphasises the examples which illustrate art as a way of response.

(5) Finally, Scharfstein puts forward art as a helpful way to create the interdependence and emotional closeness of the members of a group. In the same way,

Dewey explains how art is a quality that permeates an experience; an experience in which a body of social matters and cultural meanings become aesthetic as they enter into an ordered rhythmic movement toward consummation. Like birds displays, human dancing or ceremonies are both an integral part. To understand them, we should remember about intimacy with our bodies, but also our closeness of the group; in short, our biological, cultural and individual background.

Briefly, I contrast Scharfstein's analogies between birds and human beings with some of the main ideas which constitute Dewey's naturalistic humanism. Obviously, this presentation does not accurately reflect the depth of their thoughts, in fact this was not my intent, but it gives an approach to the main points which constitute that biological background. In spite of the differences in their epistemological explanations, both thinkers roots aesthetics in the natural context. Nonetheless, Scharfstein's prose and his multitude of examples hinder a clear comparison between both. For that reason, I am going to look into three main notions which both thinkers develop and which summarize this naturalistic background.

First of all, there is a common feature in both theses: the need for fusion. For Dewey, every human activity is the result of interaction between organisms and their surroundings, between to experience and to make, which implies a reorganization and fusion of energies. That is, living creatures are continuously suffering rhythmic alternations between disunity and unity, between harmony and chaos in their lives and this is not simply a passive activity, but a meaningful creative process which joined combination, movement and culmination, of breaks and re-adjustments. Scharfstein also talks about the fusion as a pattern of expression, of which art, especially in the form of ritual, is the most concentrated element. Similarly to Dewey, he talks about the need for fusion and emphasises how this need leads to denial that the arts are essentially separated from one another.

Nevertheless, Scharfstein seems to introduce the idea of fusion to characterize the tendency in art to go beyond the limited impulse, the limited aspect of life. This contrasts with Dewey's idea of life as aesthetic process; it appears as if Scharfstein wanted to attribute such a privileged status to art versus the humdrum of everyday life. However, that criticism is overcome if we consider his proposal and some of Scharfstein's examples of this idea of fusion, which is present everywhere in its many forms. The main problem is that Scharfstein, like Dewey, does not explain carefully the idea of fusion and it is showed in too restrictive a view, adhering to art-centred aesthetics. We need to focus on his examples, particularly on Kung's words.¹³ Scharfstein explains the extraordinary loquacity and interesting characteristic of this language, which "makes their encampment sound like a brook the endless murmuring of which is punctuated by shrieks of laughter."¹⁴ Their

language is more than a system of communication, it contains lyrics, rhythmical games, dancing; therefore, its ordinary prose turns into “stylized eddies of art.”¹⁵ !Kung’s language evinces how Scharfstein’s idea of fusion opens a new way of thinking not only in art, but also in life. The basic subject is fusion of art with art, friend with friend, and art with reality.¹⁶ For that reason, the aesthetic process is not restricted to rare events and people, but it is involved from the start with perception. It entails sensitive awareness of our surroundings.

Thus, I should like to supplement the idea of fusion or organization of energies with two related ideas: oscillation and equilibrium. Scharfstein exposes how oscillation is a fusion which joins different elements, in fact, he asserts, the whole history of art seems to be made of alternations or oscillations between extremes.¹⁷ That oscillation requires opposites to succeed one another, equilibrium requires their simultaneous presence. In the same way, Dewey shows how living creatures restore the harmony in their environment, adopt a meaning and this is possible because our environment is in flux, as Thomas Alexander said “meaning is only possible in a world which can be disrupted, in which ambiguity, change, and destruction play a role.”¹⁸ Our lives are developed in variable and disruptive situations and places that need a sense; hence human beings signify different phases of their lives at every moment.

As far as the equilibrium is concerned, this comes about not mechanically and inertly but because of oscillation. There is in nature, in our lives, something more than mere flux, there is reached equilibrium. Life supposes energy and attention, but also pulses or stimuli; life is a process of interacting and interchanging through which man dynamically organises his environment. For that reason, Dewey gives the same value to change and order; in fact, if there is a greater change or variation, there will be a more interesting aesthetic response. Aesthetic perception is a full act of perceiving what happens in our lives when we are both most alive and most concentrated on the engagement with the environment.

Scharfstein introduces the ability to create powerful equilibrium by means of artists. Chinese art is, for Scharfstein, a marvellous example because it frequently uses principles of equilibrium. For instance, Chinese calligraphy makes evident these principles by the stroke. One stroke of the brush is a tonic pulsation by which individual and universal lives are joined.¹⁹ Scharfstein introduces Shí Tāo (石涛), who developed fundamental aspects of rhythm in capturing the spirit resonance of the world and revealed its immensity through the method of one-stroke in the seventeenth century.²⁰ He talks about rhythm because it sets that harmonization or equilibrium which direct the interaction with our environment.

In other words, rhythm and oscillation focus on the way that we deal with our activities, presenting the present which constitute the art of living, according to

Crispin Sartwell.²¹ Therefore, according to Dewey and Scharfstein, we need to debunk the myth that opposes art and utility. Western art has characterised it for its own sake; in fact artworks are separated from crafts because these are useful products in our everyday lives. In contrast, these thinkers, the same than other cultures, consider aesthetic practices and arts as a way of intensifying our lives, as a useful process. Dewey refuses the kantian aesthetic tradition, like Richard Shusterman asserts, because his aesthetic naturalism entails all living creatures, not some intellectualized properties of form. Similarly, Scharfstein denies the eighteenth century tradition of art through an analysis of the art of the present and its features to claim art as essentially universal.

II. The functionality of art

Art has been traditionally defined emphasising different elements (such as disinterested contemplation, artists' creative process or works of art) but these authors' proposal presents art as a quality of doing and of what is done. Both introduce a useful definition of art because it is in too many things and it is too hard to separate from them, because it is present in every form we act²². Thus, they show how all human beings share the condition that makes art both universal and indispensable. At this point, I would like to address fundamental similarities between Dewey's notion of art as a celebration of the life of a culture and Scharfstein's view of art as exhibition of the deep forms of individual and culture, carried in his recent work *Art without Borders* (2009).

In the fourteenth chapter of *Art as Experience*, called *Art and Civilization*, Dewey defined art as "a manifestation, a record and celebration of the life of a civilization, a means of promoting its development, and is also the ultimate judgment upon the quality of a civilization."²³ Similarly, Scharfstein argues that "art in all its forms is always the instinctive and the willed antithesis of loneliness,"²⁴ but it is always something else, it creates, disrupts and recreates the human order, it is a shared human response. Human beings learn from experience, and this experience is not only individual, but also social. We learn social customs which are modes of action with story and transmitted meaning; we develop our capacities and share attitudes of the culture in which we participate. These elements are enduring and inseparable forces that organise our existences and art, as Dewey and Scharfstein say, they are the great force in effecting the consolidation of our pattern of everyday sociability.²⁵ Art is the most intense activity conformed to the needs and conditions, and it introduces the substantial aspects of each culture.

Aesthetic experience is more than aesthetic, each of the communal modes of activity, unites the practical, the social, and the educative, which is the expres-

sion of the life of the community. In that respect, Scharfstein takes the aesthetic experience further and gives a summary of the traits essential for it, regardless of a culture's origin²⁶. He justifies this point by enumerating reasons why sensations, perceptions and basic aesthetic preferences are roughly alike among all human beings, despite the fact that these basic human emotions are altered by social and cultural habits. Dewey does not support this kind of reason, but he recognises how "works of art are means by which we enter, through imagination and the emotions they evoke, into other forms of relationship and participation than our own."²⁷ Nevertheless, whereas Scharfstein gives biological and even scientific reasons such as our neurological vision, our capacity of perceiving colour or our ability to construct objects; Dewey offers an anthropological reasoning to explain how we can arrive at the attitudes expressed in the art of another civilization because of their closeness to them. For Dewey, the field, in which art takes place, is able to break down boundaries between cultures. In this way, although these authors explain from different points of view our immediate and potential capacity of having aesthetic experiences of another culture, they share the vision of art as a language without boundaries, as an engaged interaction between the parts.

This raises the question of whether we can experience aesthetically art of another culture. Dewey and Scharfstein maintain that art supposes a genuine participation, in some degree and phase, in the experience of another culture. The ability of art to be experienced as great by people of different times and traditions rests not only on its panhuman qualities, but also on the variable readiness of its spectators to appreciate it.²⁸ Through art we learn from one another, change our way of participating, and become more similar and more human. Therefore, both authors claim that we can appreciate different arts and the very variability of experiences from our own context, our present lives. In this way, Dewey's attitude is more optimistic, or perhaps naïve, than Scharfstein's position because he does not seem to see the limits in this kind of interaction.²⁹ However, although Scharfstein indicates that there are cultural constraints, he also points that our ignorance of the subtlety and depth of intimate acquaintance does not deny their pan-cultural expressiveness.³⁰ For that reason, Scharfstein explains that the experience of foreign works "may be to the good, as when it accentuates characteristics of the art that familiarity has made invisible to those who were born to it."³¹ This does not imply contradiction between the endless variety of aesthetic phenomena and the human universality that underlies it, but as Scharfstein says, "it is more helpful to become aware of how endless variety makes up endlessly rich sets of variations on common human themes."³²

III. Conclusion: the continuity between art and life as endless process

The aim of this paper has been to re-focus interest in Dewey's naturalism and Scharfstein's universalism because both proposals try to restore the continuity between art and life. Despite the divergences, these thinkers provide a global overview of art's creation and reception which attempt to demonstrate the rich background of our lives, from which we create art as a way of leading a meaningful life. Dewey's principle of continuity and Scharfstein's idea of common aesthetic sense is too complex to be explained briefly on these pages, for that reason, to conclude I would like to sum up the main ideas of this presentation in three points.

Firstly, this paper has tried to show, or at least suggest, the aesthetic dimension of our lives. Through naturalistic proposal, aesthetics roots in basic needs or biological commonplaces. Scharfstein's example of birds and Dewey's features of experience reveal how art is the product of the interaction between human beings and its environment. However, whereas Scharfstein emphasises the personal and social aspect of human needs, Dewey points to organic needs. Nevertheless, they share the belief that the conditions which make art possible are the world itself, both our biological-sociological rhythms and the larger rhythms of nature. Through this naturalistic approach it is easier to explain why the arts have taken so different forms and have nonetheless seemed to us to be so much alike, identifiable emotionally or imaginatively as art in spite of their variety.³³ If life is always also aesthetic, art can plausibly be explained as a heightened, more highly focused embodiment or ordinary experiences.

Secondly, this presentation criticises the damaging dualisms and antithesis formulated by philosophy since Descartes and Locke. Art is neither simply objective nor subjective, but both. Its objective basis results from its biological background and its subjective aspect emerges from the creative process that involved both the artist and the perceiver. In contrast to the eighteenth century tradition of art which has unduly intellectualized works of art, both thinkers root aesthetics in life and experience, accepting it in all its uncertainty. Their naturalism breaks down old dualisms such as art-crafts, disinterested-useful, spiritual-natural, becoming open to all varieties of aesthetic experiences from contemporary art or other cultures. That unification of artistic traditions and sensitivities, which is generalized from numerous episodes of cultural contact, supposes a new place not only to experience, but also to communicate.

Finally, this paper presents art, like life, as an endless process. In every single moment, every living creature experiences the world and organises the energies,

and this is a continuous process. That endless process, which incessantly needs new meanings or responses, supposes a creative participation, through which we interact with the surroundings and develop ourselves as part of a group. Maybe Scharfstein's last words in *Birds, Beasts and other Artists* can explain this point more clearly:

Art ties us together with filaments of imagination and entangles us more deeply in our humanity. It inscribes our space, inward and outward, with the transformations of life. It is our fusion with the world by means of our fusion with one another, and our fusion with one another by means of our fusion with the world. It is sensual, abstract, immediate, distant, clear and enigmatic. I have explained it as best I can, but I know that I have left it still enigmatic. The enigma, like the explanation, always renews itself.³⁴

Endnotes

1. K. Okakura, *Book of Tea*, Berkeley: Stone Bridge Press, 2007, p. 6.
2. J. Dewey, *Art as Experience. The Later Works, 1925–1953*, vol. X., Carbondale: Southern Illinois University, 1987, p. 9.
3. *Ibid.*, p. 9.
4. *Ibid.*, p. 19.
5. B.-A. Scharfstein, *Of Birds, Beast and other Artists. An Essay on the Universality of Art*, New York: New York University Press, 1988, p. 188.
6. Scharfstein comments that birds have two primary reasons for which to sing: one to defend its territory against other males, and to attract females. *Ibid.*, p. 38.
7. *Ibid.*, p. 48.
8. J. Dewey, *Art as Experience...*, p. 110.
9. B.-A. Scharfstein, *Of Birds, Beast and other Artists...*, p. 48.
10. *Ibid.*, p. 49.
11. Cf. J. Dewey, *Art as Experience...*, pp. 139–167.
12. B.-A. Scharfstein, *Of Birds, Beast and other Artists...*, pp. 51–52.
13. !Kung people live in the Kalahari Desert in Namibia, Botswana and in Angola. They have a hunting and gathering lifestyle and are highly dependent on each other for survival. They speak the !Kung language, characterized by using click consonants, frequent speech sounds in many languages of southern of Africa.
14. B.-A. Scharfstein, *Of Birds, Beast and other Artists...*, p. 200.
15. "A particularly exciting or dangerous event arouses 'volcanic eruptions of sounds', which an anthropologist describes as 'the greatest din I have ever heard human beings produce out of themselves,'" *Ibid.*, p. 201.
16. *Ibid.*, p. 202.
17. *Ibid.*, pp. 209–210.

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18. T. Alexander, *John Dewey's. Theory of Art, Experience and Nature. The Horizons of Feelings*, New York: SUNY, 1987, p. 125.
19. B.-A. Scharfstein, *Of Birds, Beast and other Artists...*, pp. 212–213.
20. Cf. Shí Tào's ontology of art the one stroke, which is the expression for the inherent fusion of things. The one-strokedness supposes synthesis, contains in itself the universe and beyond; thousands and myriads of strokes. Therefore, Shí Tào (石濤) gives to the art of painting, born from one stroke of the brush, the role of generating a world. In a changing world, painting is the great way of the transformation of the world. (B.-A. Scharfstein, *Of Birds, Beast and other Artists...*, pp. 205–206).
21. C. Sartwell, *The Art of Living: Aesthetics of the Ordinary in World Spiritual Traditions*, New York: SUNY, 1995.
22. B.-A. Scharfstein, *Of Birds, Beast and other Artists...*, p. 228.
23. J. Dewey, *Art as Experience...*, p. 327.
24. B.-A. Scharfstein, *Of Birds, Beast and other Artists...*, p. 228.
25. Cf. B.-A. Scharfstein, *Art without Borders: A Philosophical Exploration of Art and Humanity*, Chicago: Chicago University Press, 2009, p. 390: "In either style the members of the groups of culture fuse themselves into a single expressive pattern of which a ritual, with its art, is the most easily identified example. The patterns of everyday sociability are the substrata in which the fusions of ritual and art take shape". J. Dewey, *Art as Experience...*, p. 327: "The works in which meanings have received objective expression endure. They become part of the environment, and interaction with this phase of the environment is the axis of continuity in the life of civilization".
26. Cf. B.-A. Scharfstein, *Art without Borders...*, pp. 361–364.
27. J. Dewey, *Art as Experience...*, p. 336.
28. B.-A. Scharfstein, *Art without Borders...*, p. 385.
29. Cf. Cynthia Freeland's criticism about Dewey's proposal of art as a universal language between cultures in chapter III *Cultural Crossings*, [in:] idem, *But, is it Art?: An Introductory to Art Theory*, New York: Oxford University Press, 2002, pp. 60–89.
30. B.-A. Scharfstein, *Art without Borders...*, 2009, p. 369.
31. Ibid., p. 367.
32. Ibid., p. 367.
33. Ibid., p. 15.
34. B.-A. Scharfstein, *Of Birds, Beast and other Artists...*, p. 230.

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3 Aesthetics of Nature and Body

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Being Open to Nature: the Aesthetic Dimension of Anoxism

Anoxism is a new contemporary philosophy which has spread from Asia to Europe in recent years. Anoxism, also known as Phoenixism which is based on the Phoenixist School, is a doctrine advocating being open and using all the resources to create new things. It considers every single real-time open entity as possessing undefined parameters, which exchanges and interacts with external others through opening activities. This doctrine makes use of every individual body or social entity's open-mindedness, co-operation and innovation to bring about the exchange and interaction between two parties. Anoxism insists on respecting the freedom of each living entity to the maximum degree through its principle of openness and acceptance, allowing every living entity in the universe to live and grow naturally without rejecting any possibilities in life.

Anoxism is a scientific truth-seeking theory which has scientific influences from different fields. In the meanwhile, Anoxism advocates that its theories must be able to withstand scientific inspection and verification and also must be able to run parallel with the most basic principles of science. Even so, the most fundamental essence of Anoxism is that it is a way of living and an attitude of life. Based on this point, Anoxism has ethical and religious implications.

An open container

Ever since the Age of Enlightenment, countless philosophies have been established. It is as Blaise Pascal said, "Man is only a reed, but he is a thinking reed".¹ One of the most important traits which differentiates humans from animals could be Descartes' famous saying "je pense", which translates to "I think". In terms of the many doctrines and philosophies established in history, what kind of attitude should we have towards them? Anoxism introduced the idea of "an

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open container”. Anoxism advocates having an open attitude towards all of the doctrines and philosophies in the world, using the principle of openness to accept and acknowledge every doctrine in the world, placing them into a container like Anoxism and hoping to integrate and bring on new ideas of knowledge and value innovation through the openness and innovation of different doctrines.

Anoxism once used “Who Am I?” to describe its theoretical propositions:

Who am I?

I am a naturalist, and a humanist

I am a pragmatist, and an idealist

I am a liberalist, and a communitarian

I am a traditionalist, and an anti-traditionalist

I am the keeper of values, and an open and innovative theorist

I am an open container.

his container is waiting to be filled with being and nothingness, as well as the different values.²

We can see that Anoxism is made up of different theories and ideologies. It makes use of a concept like “an open container” to incorporate different theories and philosophies. The concept of an “open container” is like a big furnace, smelting together theories and knowledge of value. In this way, Anoxism is not only a kind of open doctrine, but also a kind of doctrine which encourages integration and innovation.

As an open philosophy, the core of Anoxism is that it is a liberalist doctrine which is based on basic human nature. However, Anoxism is not a philosophy which is simple or primitive. It is a kind of Phoenixist Liberalism. Phoenixist Liberalism considers the passion for freedom as part of human nature and that fact is to be respected primarily. Phoenixist Liberalism does not present an idea such as “absolute freedom”, but instead uses a concept such as “respecting freedom in life to the maximum degree”. Phoenixism considers the value of life as the starting point of its ethics, placing Phoenixist reservations on some acts of free will such as violence, revolution and war. Phoenixism takes Liberalism as an academic resource but advocates a kind of Phoenixist Liberalism which respects the Naturalistic Liberalism to the maximum degree but insists on non-violent Liberalism.

Another important source which Anoxism draws from is Taoist Naturalism. In the pursuit of many values of liberal thought, Anoxism particularly favours the naturalist aspects of Taoism. Anoxism tries to enable every living entity to live naturally and freely as a blade of grass or as a tree grows under the sun, in

the meantime not rejecting any possibilities in life. Anoixism is an open and accepting theory; in order to avoid rejection of secular values due to the value of nature, Anoixism specifically indicates that Anoixist Naturalism is a kind of human naturalism. It doesn't reject any possibilities in life, including the right of every living entity to pursue a secular life.

The sources of Anoixism are extensive. It states openness and acceptance as its first principle, and from that, theories and concepts are absorbed. These concepts and theories mainly include: from science, the theory of relativity, Open System Theory, Self-Organization Theory, Synergetics etc.; from eastern philosophy, Taoism, Confucianism, Emotionalism, Buddhism, Physiocracy etc.; from western philosophy, Liberalism, Communitarianism, Humanism, Pragmatism, Ecologism etc.; Besides that, there is also Egyptianism, Resurrectionism, Christianity and so on. Anoixism accepts and acknowledges every theory and doctrine in the world.

Phoenixist ethics

Anoixism has two main dimensions of truth and value. It explores spiritual essence but more importantly, it is a kind of attitude and way of living. Phoenixism, known as a part of Anoixism, which has much to do with life, human and Constitutionalism, has a set of Phoenixist ethics.

Phoenixist ethics is a set of ethics which respects nature and freedom. Phoenixist liberalism and Anoixist naturalism are two main parts of Phoenixist ethics. Phoenixism uses analogies of "all rivers flow to the sea" and "all creatures grow" to describe human life's actions and flow of values, which advocate enabling every living entity to live and grow naturally as a blade of grass or as a tree grows, while using the maximum degree of acceptance to respect the freedom of life as a target value.

The natural world and human nature is the outset of Phoenixist ethics. To live naturally, be open and grow freely in the universe is the ultimate ideal of Phoenixist ethics. The Phoenixist ethics claims to enable every living entity to live naturally as a blade of grass or as a tree grows in the sunshine, encompassing every possible mode of survival. Phoenixist ethics thinks that "human nature" is an important starting point of ethics. Any ethics which is contrary to human nature is an inhumane ethics to a certain degree. Taking the value of life as a starting point, Phoenixism thinks that the pursuit of free will cannot be deprived from human nature, which is why Phoenixism considers "respecting freedom in life to the maximum degree" as the greatest pinnacle of its philosophy.

However, Phoenixism acknowledges that human nature could involve complex patterns in life. A definition of "human" includes "rational animal", "hermeneutic

animal”, “religious animal”, “free and self-conscious animal”, “being-in-itself and being-for-itself animal”, “animal with the ability to manufacture and use tools”, “animal with the ability to use language and symbols”, “political animal”, “social animal”, “cultural animal”, “playful animal”, “aesthetic animal”, “sexual animal”, “loving animal” and so on.³ It is possible for human nature to get caught up in conflicts of interest which cannot be reconciled, which is why Phoenixist ethics coordinates interpersonal relationships through “a contract of equal will” and “minimal norms”.

Phoenixism insists on respecting the freedom to the maximum degree through its principle of openness, while placing reservations on violence so as to respect the value of nature, life and eternal peace. Phoenixist liberalism is a kind of liberalism based on human rights. It advocates respecting the Naturalistic liberalism to the maximum degree but proposes a non-violent liberalism which leaves room for Phoenixist Constitutionalism and Phoenixist Reservation. Phoenixist Reservation shows a kind of state in which one holds back a certain aspect of one’s own freedom and grants it to the democratic Constitutionalism based on the contracts of equal free will. Phoenixism is convinced that any “norm” and “reservation” may reduce the freedom of human nature. Therefore, it proposes the “ethics with the least amount of norms” and “government with the least amount of control(violence)” should be the ultimate goal of its ethics. Phoenixism considers “the ethics with the least amount of norms” as the best ethics and “the government with the least amount of control” as the best government. Phoenixism reduces norms to the minimal degree, and uses the ethics with the least norms as the basis for all ethics, laws, as well as social sciences. Phoenixism declares that a set of ethics in which morality is present only is one of immoral ethics and proposes a value-based ethics instead. Based on this reason, Phoenixism proclaims all constructed ethics as immoral ethics.

Anoixist aesthetics: the aesthetic dimension of anoixism and phoenixism

Anoixism is an open container, a combination of the East and West, the past and the present. It is an intriguing open integration of different ideas and traditions. Anoixism uses its principle of openness to accept and acknowledge all doctrines and religions but in essence, it concentrates on naturalistic liberalism. Anoixism once declared that naturalism and liberalism is its main characteristic. Anoixism advocates living naturally and freely as a blade of grass or as a tree grows under the sun without rejecting any possibilities in life. Anoixism has three points concerning the way of life: one, concerning ultimate value and meaning;

two, respecting nature, life and humanity; three, pursuing beauty and harmony. These three aspects show the aesthetic dimension of Anoixism, demonstrating the presence of Anoixist aesthetics in the theory of Anoixism.

Anoixist aesthetics is integrated in Anoixism inherently. Anoixist aesthetics consists of the following three stages:

1. The aesthetics of unity of subject and object

Anoixist aesthetics considers that beauty is generated on the way which the subject encounters the object. Anoixist aesthetics points out that, besides the natural property of the item itself, subjective aesthetic activity of human kind has inseparable functional significance to the generating of beauty. Man is the measure of beauty and sets the law of beauty.

Anoixist aesthetics insists on the unity of subject and object. Objectivism holds that beauty is the objective characteristic, which is independent from people's will; subjectivism holds that, beauty is not the characteristic of an object but exists in viewers' minds. However, unlike either of them, Anoixist aesthetics considers aesthetic values as a sort of characteristic, which is shown to the subject by the object. Aesthetic value cannot depart from either elements of the object or aesthetic contemplation of the subject. Anoixist aesthetics contends that beauty is the unity of subject and object. Aesthetic value is one people built during their long-term aesthetic activities. Only through solid aesthetic relationships, activities and practices can aesthetic values be shown as limited objectivity.

Thomas Munro once compared the link between object and subject to nutrition theories. In *Scientific Method in Aesthetics*, Munro points out that not all qualities in food are equal to nutrition. Nutrition exists in the relationship between these qualities and the need of a certain body. Similarly, any quality of tangible objects cannot be perceived without aesthetic needs from conscious subjects. Therefore, it cannot be addressed as beauty either. Food becomes nutrition when it encounters certain subjects, so does beauty. When faced with certain aesthetic needs beauty can be named as aesthetic values. The nutrition analogy illustrates that aesthetic value is the quality of the object, in the meanwhile the value is only meaningful in terms of the aesthetic needs of certain subjects.

2. Aesthetics of relativity

Anoixist aesthetics holds that the essence of beauty blossoms at the moment when the subject encounters the object and that it blossoms differently every

time. Anoixist aesthetics starts from the aesthetics of the unity of subject and object and then develops its relativistic attribute theory and relativistic aesthetics. Anoixist aesthetics points out that all things exist in the collection of all aspects of its attributes and the way anything exists is indeed the unity of its all characteristics. Things appear different attributes in the specific activities between the subject and object. Aesthetic value is one of the attributes of the object that appears in certain aesthetic relationships. Relativistic aesthetics contends that the attributes of the object cannot be cut from observations and perceptions of the subject. As Einstein states, in different Inertial Systems, observational results of time and space will vary due to the changes of Inertial System. Even though the object demonstrates a relative certainty in a particular reference system, it appears with a different status and characteristics in specific relationship between subject and object. The object is the total of these attributes and characteristics and it appears over and over again in certain relationships. It shows various valuable attributes relatively to different subjects and activities.

Anoixist aesthetics uses Copenhagen interpretation's probabilistic collapse of Schrödinger equation to illustrate the openness of beauty. Anoixist aesthetics depicts the openness and relativity of beauty as, "The naissance of beauty is the collapse of eigenstates. Beauty is a momentary bloom when subject encounters object. The naissance of beauty is a kind of probability which is yet to be determined, and exhibits differently with respect to different subjects' aesthetic activities. Before beauty became an aesthetic object, there was neither beauty nor not beauty, thus it was an undetermined probability whether it shall gain the attribute of beauty or not. Diversity occurs in different relationships and activities between subject and object. The naissance of beauty results from the collapse of eigenstates. In humankind's aesthetic activities, the encounter between subject and object causes the collapse of observing object to an eigenstate called 'beauty'."

From Anoixist aesthetics' point of view, attributes are the characteristics which an object reveals in front of different subjects. When the relationship varies, the attributes may change accordingly. For instance, sounds are vibrations of waves. Colors are light waves with certain wavelengths. Certain sounds and colors become certain kinds of beauty when they are exposed to human's aesthetic senses. Similarly, in terms of art, art itself is an empty shell which can express various meanings to people's appreciations. For example, a novel is merely a decorated pile of printed papers before anyone reads it. Only when it is read can it turn into meaningful and lively works. Viewed through the eyes of Anoixist aesthetics, literary works are full of blank spaces and points

of uncertainty while appreciation from readers is the only thing that can turn them into meaningful works.

3. Axiological aesthetics

Anoxist aesthetics starts from the unity of subject and object and relativity and then expresses its theory as a sort of Axiological Aesthetics. It states, "Beauty is a superposition of Eigenstates of aesthetic values." Axiological Aesthetics holds that value is the attribute of the object, which is shown to human beings' "needs-wants" structure or "needs-preference" structure. Axiological Aesthetics thinks that beauty is born from the "this time" of human's aesthetic relationships and behaviors. Axiological Aesthetics concludes the understandings of aesthetic value from countless concrete "this time" of aesthetic activities. Axiological Aesthetics thinks that aesthetic values lie not only in the attributes and characteristics of aesthetic objects, but also in every aesthetic activity when the human subject is confronted with nature, social life and inner feelings. Aesthetic value represents a special aesthetic relationship between subject and object. This relationship is an adaptive mechanism built in the long term practices between subject and object. It is such a complicated reaction relationship that people use various psychological elements – physical and mental, emotional and rational, conscious and unconscious, to face the nature, society and art. Aesthetic value is an axiological attribute shown to aesthetic needs based on the adaptation mechanism between humans and nature. It is also the axiological attribute generated through human's long-term aesthetic activities. It reveals the adaptive relationship between the subject and object as well as all human's consciousness of life, humanity, sexuality, subjectivity and so on.

Axiological Aesthetics declares that aesthetic value is "an open composite construct" of value. It considers aesthetic value as an open complex value construct, which is open and composed of all kinds of elements. Also, the aesthetic value must be observed from detailed aesthetic practices and artistic activities. Aesthetic value is never isolated; it indeed consists of all kinds of value, such as material value, ethical value and religious value. Similarly, artistic value and non-aesthetic value cannot be separated. Art represents aesthetic and non-aesthetic values at the same time, just as it represents aesthetic value and anti-aesthetic value at the same time. Art creates aesthetic value together with other values, for example material value, political value, ethical value and religious value. As a result, aesthetic value and artistic value are kinds of open construct that consist of other values.

Naturalistic liberalism is the major ethical and religious belief of Anoxism, however, Anoxism and Phoenixism are far more complicated. It starts from

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respecting the nature, life and human rights and then develops a non-violent Liberalism. It always takes openness, freedom, tolerance and acceptance as its fundamental methodological principles. Anoxism and Phoenixism are far more than it expresses – it takes openness and limitlessness as its eternal pursuit and belief. Being open to nature shows not only the Anoxist attitude for the universe, nature and life, but also the Phoenixist pursuit for openness and freedom, reflecting the pursuit of ultimate value as well as the existence of the aesthetic dimension. Therefore, Anoxist aesthetics becomes a unique scene of Anoxism and Phoenixism.

Endnotes

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On the T'ai chi chu'uan of Somaesthetics and Chinese Classic Culture

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A renewed interest for overcoming the anthropocentrism and dualism has emerged in recent decades. Some scholars started to pay attention to traditional orientations that claim knowledge of the ahistorical, transcultural, universal and objective self. Under this background, Richard Shusterman introduced his somaesthetics as a concept from *Pragmatist Aesthetics*; it was provisionally defined as “the critical ameliorative study of one’s experience and use of one’s body as locus of sensory aesthetic appreciation (aesthesis) and creative self-fashioning.”¹ Simultaneously, as he said, “bodywork is a rubric for a variety of practices that “promote heightened somatic consciousness and body–mind attunement: from yoga and T’ai chi chu’uan to Zazen and Alexander Technique.”²

T’ai chi chu’uan, the profound martial art of Kongfu, whose core philosophy is drawn from Taoism, stresses the quality of life and aims for a high level of human being by following the way of nature. It is also the most able to represent the unique ethos and cultural core of Confucianism, Buddhism, I-ching, Wushu, Traditional Chinese Medicine as well as Zen.

One may as well regard the basic thirteen general postures: Peng, Lou, Ji, An, Cai, Lie, Zhou, Kao, Jin, Tui, Gu, Pan, Ding. (Fig.1). All of them are interlocked and flow as successions or rotations, so that all body movements look like a gentle breeze blowing over the water, a sea swallowing the whale, a rapidly flowing wave, or a dancing colored ribbon.

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The performance of living or sensing, on a dynamic, perceptive body,³ all embodied in T'ai chi chu'uan 's aesthetic, is similar to the views of classic Chinese culture about spiritual exercises.

Based on this ground I shall explore in the paper, some critical aspects of T'ai chi chu'uan which may offer an alternative to anthropocentrism and dualism of today.



Fig. 1. Posture Peng expressed by arms. Demonstrator: Lingling Peng

1. T'ai chi chu'uan out of T'ai chi

In Chinese language the term “T'ai chi”, usually refers to the ultimate supreme. Its first interpretation, as a philosophical concept, dates back to *Great Commentary to Change*: “The changes have the T'ai chi, which generated the two models. The two models generated the four symbols; the four symbols generated the eight trigrams.”⁴

During the Three Kingdom periods (184–280), Han Kangbo 韓康伯 (date of birth unknown) used the Taoist idea that “being” is generated from “being less” to express that the two models are the being, and the T'ai chi is being less. Based on the former one, the latter is postulated. In this respect Lao Tzu 老子 (about 571–471BC) said, that “The Way generated the One, the One produced two.”⁵

Zhou Dunyi 周敦頤 (1017–1073), developed this notion in his *Explanation of Diagram of Supreme Ultimate*, considering T'ai chi as the origin for Yin-Yang (two models) and for the five agents-elements (water, fire, wood, metal and earth) which are the common basis of all things.⁶ All of the above concur in affirming

that T'ai chi is the ultimate supreme as metaphysical principle. In addition, some held that the term "T'ai chi" and "original Qi 氣" can be used as one and the same thing but may also be differentiated. For example in the Han History it is written that: "T'ai chi, the origin and Qi though three names are one."⁷

Distinctively, Qi has some important features according to traditional Chinese scholars:

1. Qi is the original material from which all things are formed by coagulation;
2. Qi has breadth and depth and can be spoken of;
3. Qi is in contrast (opposition) with the mind. It exists independent of the mind;
4. Qi can move. It is normally in a state of flux and transformation.
5. Qi is not impenetrable; rather, it penetrates all things.

Those views have far-reaching effects since these functions of Qi are widely shared in China. Practicing Qi, in order to improve the quality of spirituality, is of prime importance here. The same applies to people practicing T'ai chi chu'uan.

At last, a noteworthy opinion is that each person has his or her own T'ai chi. Zhuxi 朱熹 (1130–1200) is a representative of this doctrine. He wrote that:

Speaking from the point of view of male and female each of them has its own T'ai chi; speaking from the point of view of the myriad things, each of them has its own T'ai chi. Altogether, T'ai chi is a unity and the myriad things from it. Hence each person and each thing does possess T'ai chi.⁸

Here, T'ai chi is still being taken as a principle.

From another perspective, T'ai chi of each person was stressed, for instance, by Shao Yong 邵雍 (1011–1077) and Lu Jiuyuan 陸九淵 (1139–1193) who believed that spotless heart is T'ai chi; in the T'ai chi chu'uan classic *The Great and Small T'ai chi* the interpretation is the following one: "The universe is a great T'ai chi, the living body is a small T'ai chi. Therefore, T'ai chi chu'uan should not be out of reach."

Thus in the course of history there have been different interpretations for "T'ai chi": that everything springing from T'ai chi (the supreme ultimate, Qi), and that for each person there is a T'ai chi (spotless mind, living body as Qi). When the T'ai chi of humanity and the T'ai chi of the universe are one, human beings will realize their infinite nature. By being true to their nature, the peace and harmony will reign supreme.

To some extent, T'ai chi chu'uan, is a system of practices to reach the metaphysical foundations of nature as a common ground to be experienced and

tested by one. The basic aim of T'ai chi chu'uan has not been to understand the world, but to make people understand their nature and to feel happy. This is quite a remarkable achievement, not only because of its intrinsic merits (as being beneficial to body fitness, to mental health, to fighting and defending oneself), but also because of the insight it provides into the nature of self.

2. Embodiment and exploring the nature of self

A traditional verse of T'ai chi chu'uan, *Looking Back Four Natures* created by Han Gongyue Fuzi (502–557), discussed “self-nature” as follows: “If you don't know the self-nature of yourself, how can you know other beings?”⁹ These could be interpreted as such: only those who fulfill their wholeness of self-nature can comprehend the nature of others, and thus comply with the nature of the world.

Furthermore, there is another text called *On the Great Value of Whole Body* written during Song dynasty which puts forward that self-nature should be the first request while doing T'ai chi chu'uan exercises: “Firstly, you'd better comprehend the self-nature, and then concentrate on no-mind. Therefore, the body will be changed consequently and become nimble and soft everywhere.”¹⁰

Equally, in Zen, seeing the self-nature is considered as the primary pathway to reach the Buddha-hood. The so-called nirvana, emptiness in nature, marvelous existence, three bodies (truth body, reward body, response body), four kinds of pure cognition (cognition with unrestricted activity, marvelous observing cognition, cognition of essential identity, great perfect mirror cognition), all these objective realms start from recognizing the self-nature, and achieving a full comprehension beyond all theories, as it explained by Huineng (638–713):

Seeing self-nature is equal to self-salvation. What does it mean? When a false thought appears, correct it with rightness. When you are lost in self-nature, clear yourself by recognizing it. When a delusion is coming, replace it with wisdom. When doing evil would begin, stop it by doing good.¹¹

What Huineng is saying is that we have to observe objectively what we are doing and thinking so that we focus more effectively on what we ought to do. In order to obtain that, the unreflective actions or habits must be brought to conscious, critical reflection.¹² By embodying consciousness we realize a living, sentient body which not only opens to the world but also experiences itself, (subjectively and objectively).¹³

Obviously, in regard to the identification of the self-nature, T'ai chi chu'uan has the same view as Zen: presenting self-nature as the understanding of the essence of the enlightened self which is beyond empirical and conceptual reign,

and lead to the full experience of the core of a being. The more someone is willing to understand his true nature, the more he can live his life authentically. Certainly, T'ai chi chu'uan, as a regular practice is the most powerful means towards this self-nature.

3. Aesthetic appearance of T'ai chi chu'uan

A) Stillness and movement

T'ai chi chu'uan lit up the unique image that emerges with focused attention: despite the appearance of T'ai chi chu'uan as a tiger leaping, a dragon thundering, jade rings rippling and undulating, and bamboo grove flicking, its essential and complete statement is the silent core of a tornado, the calm lake that reflects innumerable mountains. Undoubtedly, this is the general principle of being still within the movement, put forward by T'ai chi chu'uan master, Wang Zongyue (who lived in the Ming dynasty) and who gives the following explanation:

The extreme move and the stillness gave birth to Yin and Yang. Movement proves separate. Stillness engenders the combination. If one moves in the initial stage of being still, the movement thereupon will turn into stillness.¹⁴

The term “movement and stillness”, are closely linked to *The Great Commentary* in which it is written that: movement and stillness have a constant norm; hard and soft are thereby determined.¹⁵ Referring to the interconnection between the two, Sengzhao (384–414), recognized that:

If one is searching for the purpose of stillness, how could he seek it without movement? It is necessary to find the stillness within the movement. All of things reside in a constant state of stillness, despite the fact they are moving on the surface. Thus, they seek stillness without shifting from movement; they are in movement without deviating from stillness.¹⁶

Sengzhao's view is obviously not to deny the movement but to emphasize how to reach it in a proper way. He clarified that by these examples:

The hurricane that blows down the high mountains is always static; the river is surging ceaselessly without flowing; the dust is floating everywhere without moving at all; the sun and the moon, following each other around are out of rise-fall. What is there to be surprised of?¹⁷

If enlightenment means direct insight into one's radical groundlessness and nothingness, in the light of such a revelation, Sengzhao had been convinced that there is a motion that never ends, and that beneath the surface lays an un-

shakable stillness. Correspondingly, T'ai chi chu'uan regards the self-nature as stillness, the mind as the movement, therefore, many T'ai chi chu'uan masters believe that moving should be settled down on stillness.

Here, being still in movements in T'ai chi chu'uan should be seen in two aspects. On the one hand, once the deluded thoughts emerged, the awareness of the present (such as the position of the body, sensations, breathing, gestures, flux of the Qi as well) is able to take one back to full consciousness at any moment- if he becomes aware and accepts what is happening.

During this period, one will find that his mind creates his future; however, as soon as he has given up his thought disorder, the real stillness becomes apparent. Me for instance, when I practice T'ai chi chu'uan, by being aware of every thought, I find that there is an order that makes the body move; it is not my primary and collateral channels which transport energy, but I am transporting the energy in my collateral channels. In a word, I recognized that "I" exist in and as a body. As a result, in a situation of relaxation and calm, mind and body become one. On the other hand, whoever practices T'ai chi chu'uan needs to learn that only patience in such a practical activity can call upon infinite engrossing and produce effects.

This is the way by which every passing moment in time receives a place in eternity. By producing results now, it abolishes time. From this perspective, rather than taking for granted that things change in time, Sengzhao believed that: "Past events only exist in the past, and should not connect with present moment. Present things exist only now, and do not come from the past. Since there is no relationship between the past and present, is there any change and move?"¹⁸

In the same sense, Yongzheng 雍正 (1678–1735), the emperor of the Qing dynasty, concluded in a verse: "Movement and stillness are one, right and wrong are out of the same root of mind, being neither emptiness nor form, being neither past nor present".¹⁹ Yongzheng's verse is much deeper, since for the enlightened mind, the reality is dynamic and a whole, not a passive and divided one. Thus, there is no judgment for right or wrong, no dividing line in emptiness and form, no flow from the past to present, and no distinction between movement and stillness as well. This is the right way of practicing T'ai chi chu'uan, which reflects the essential intuition unaffected by dualistic thinking or feeling, which goes beyond these boundaries to touch the stillpoint at the center of being.

B) Moderation in the center

A good case in this point is that T'ai chi chu'uan takes the circles as representations and traces, since the figures and postures change in a kaleidoscope of

sights and impressions, all of which remain linked to a fixed center. Also, there is a certain moderation in being placed near the center. Therefore the analysis of the interconnections between the “moderation” and the “center of being” in Chinese classic philosophy may be very useful.

Firstly, the expression of moderation in Confucianism means to grasp both the extremes and center (middle). As Zhu Xi 朱熹 (1130–1200) said, moderation is the name for what does not go in excess nor fall short. And according to tradition Confucius's grandson Zisi 子思 (483–402) wrote *The Mean and Harmony* comments:

The gentleman aims at moderation and harmony; the little person is opposed to moderation and harmony, the moderation and harmony of the gentleman lies in that he always stays in the center (middle); the little person's opposition to moderation and harmony lies in that he has no prudence.²⁰

The other Confucian philosopher Ye Shi 葉適 (1150–1223), interpreted moderation in terms of uniting opposites and overcoming contradictions between things:

The way has its origin in unity and it becomes embodied in duality. [...] Any forms that there are, whether Yin and Yang, hard and soft, going contrary to or going along with, going towards or away from, odd or even, separating or uniting, latitude or longitude, warp and woof are all dual. [...] Moderation is that whereby one smoothes off the duality of things so as to make clear what the duality rests on and not that the pair is able to be present. Water comes to the lowest level and stops. The way comes to the moderation and then stops.²¹

In this passage he emphasizes that relations between things may be expressed as a conflicting or complementary duality, but moderation is the harmonious way for what does not go to excess or fall short. This fundamental significance of moderation was widely accepted by scholars and penetrated the social main stream.

Secondly, moderation represents the concept of letting things achieve their own nature. In the light of Zen philosophy the self-nature is difficult to reach because one cannot reach what had already been reached. Once someone takes a step forward it means he has overstepped already. Most people are not aware of this, they forget this truth, unless they recall the eternal and find out that they are one in their own nature. Based on his general understanding of the notion of moderation, it is possible to examine its levels in T'ai chi chu'uan. The four levels are grouped according to the way they follow:

a) Physical level. For example, the people who practice T'ai chi chu'uan are requested to make the upper part of the body erect, neither to the right or to the

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left. Meantime, the whole body should be kept relaxed, sinking while grounding on the gravity center. Besides, symmetry and balance are necessary requirements for the postures, such as: opening and closing, expanding and gathering, showing and hiding, sinking down and floating up, going forward and going backward etc. (Fig. 2, Fig. 3)



Fig. 2. Opening arms while the body floating up. Demonstrator: Lingling Peng



Fig. 3. Lifting arms while the body sinking down. Demonstrator: Lingling Peng

b) Mental level. At initiation of T'ai chi chu'uan, (especially when practice Zhan Zhuang, a basic training which require to stand like a tree) one should observe his mind or so-called mental states which include thoughts, sensations, attachments, delusions, everything good and evil, any enemy or friend, the saints and unenlightened sentient beings, all phenomena as well.

To be more specific, there are positive and negative mental states; the former like happiness, joy, ecstasy, nonviolence etc; the latter like anger, regret, hatred, confusion, etc. The key of observing is to keep away from tangling in what was observed, to abandon any subjective distinction, dualistic judgments, and to allow the equality of all views. When one takes time to moderate consciously and look deeply into his mental states in order to see (through their substance), their roots in the past and their possible fruits in the future, the transformation toward the center of being would be underway.

c) Qi level. A T'ai chi chu'uan scholar, Chenxin 陳鑫 (1849–1929) affirmed that:

Generally speaking, the motion of hand is Yang, the stillness of hand is Yin, the back of body is Yang, the chest is Yin, and Yang in Yin, Yin in Yang [...], Yin and Yang must be directed in a midway which is nothing but the Mid-Qi (中氣) in my heart. So called the noble Mid-Qi dominates in center and runs outside of the body.²²

The other T'ai chi chu'uan master, Sun Lu Tang 孫祿堂 (1860–1933) shared a similar opinion in a concrete way: “ Draw back the Qi scattering out of the body by using standard actions, then mingle them with the Qi in the belly, gently and generally, make efforts to get the growth of the Qi, from nothing to something, from less to more.”²³

Most probably, both arguments stem from Lao Tzu sayings that: “All things bear the Yin on their backs and the Yang in their arms, by the blending of Qi, from Yin and Yang, the equilibrium comes to the world.”²⁴

d) Moral level. A true human being never departs from the center that cultivates the qualities such as sincerity and personal rectitude as foundation for all human relationships. This emphasize of heart, rather than mind, is taken as a basis for T'ai chi chu'uan and therefore as a guide for every action.

T'ai chi chu'uan Mi Zong has such a clear statement:

On the surface, Wushu within T'ai chi chu'uan is soft in action; but contains hard power. In the course of time, the hard power is filled with softness from heart. As a result, the hard power is hidden and not showed up, and confronts the opponent with human-heartedness that dismantles other's hard power soon afterwards.²⁵

So important is human-heartedness that one without it is not worth using T'ai chi chu'uan. According to T'ai chi chu'uan masters who choose disciples in line with their moral character, a true practitioner of T'ai chi chu'uan would do nothing to injure others. He will be wealthy in compassion, following the guidance of heart; he would moderate any actions in all aspects of life.

C) Being soft as water

Practicing T'ai chi chu'uan means breathing in and out, the whole body waving up and down like tidewater, with nine key points and sixteen joints bend and stretch with elasticity, every key links follow through continuous lines, like bamboo grove flicking in the soft wind.

As Wang Zhuanghong 王宗嶽 (1931–2008), a famous T'ai chi chu'uan philosopher and boxing teacher stated:

Any T'ai chi chu'uan should become like running water for the reason that the extreme soft is extreme hard, and the softest thing around in the world is exactly water. Moreover, as long as there is water, the gaseous fluid and the wind would be triggered, so that invisible and intangible circulation is produced and could not be controlled because of its quality of being water.²⁶

He argued that T'ai chi chu'uan should imitate the character of water in order to get a completely soft body. For the sake of reaching this situation, he emphasized that the stiffness of body must be removed.²⁷ Regarding this opinion, the western psychology offered reasonable evidence that all problems in spirit correspond to concrete cruxes in body and vice versa, since body and mind are one.²⁸

When somebody practicing T'ai chi chu'uan gets into the body consciousness, he will detect the inner parts of body as constrained by tightness and nervousness. After finding that, the instinctive reaction is to release and loosen this stiffness. It is exactly this subtle sense that could arouse the impulses locked in muscles and deliver them out in an appropriate time. Thereby, the procedure of revealing the veil of body is not passive or restrained, but positive in order to discover the inner current, reaction, vibration, lashing into the body.

However, what should be highlighted here is that the softening doesn't mean only going back to the physical body. If we cannot think over the parallelism of mind and body, the division (of the dualism) will cling. Therefore, although T'ai chi chu'uan chooses the making of a soft body as the starting point for loosing both body and mind, it may also bring another result about observing body and mind in a way similar to water.

For example, a Zen master, Lianchihong 蓮池宏 (1535–1615), who lived in the Ming dynasty, when he was passed by a group of monks who were happily taking a shower, he got a sudden enlightenment and created the poem *Ode to Bathing*: “The monks are laughing and playing while showering, washing and dislodging obsessions, getting more flesh day by day. What is the reason? I suddenly get the inspiration from water.”²⁹

What does this inspiration from water mean? It is the discovery of a point standing between mind and body which belongs neither to one, nor to the other. It is better to quote the fifth patriarch in Zen, Hongren's 弘忍 (601–675) whose concrete description “on the supreme vehicle” has an echo here:

The mind is not inside, outside, or in the middle; just observe it in the aspect of suchness and thusness, gradually and progressively. Thus it will find the motion of thoughts like a stream flowing forever. The only demand one needs is to keep on observing as they are, then arising-and-perishing will get reversal and cessation. Finally, the flowing thoughts will go extinct quietly.³⁰

This passage can be used as a sophisticated commentary of the state of being loosened and softened in T'ai chi chu'uan, meaning to become fully perceptive – to observe the mind arising, its presence, its disappearance, and not to interfere, comment or operate in any other way. When the individual is aware of the expressions of his mind and body, he will spontaneously realize that the mind and body could not constitute his self-nature. The standpoint for observing that is similar to the unlimited water. Once the individual limits his awareness to a fixed position, the grandeur which exists in him (inside) and surrounds him (outside) would not be seen. The necessary condition is that of being loose and soft while the fragments of mind and body's senses melt into the whole.

4. Conclusions

It appears, therefore, that for T'ai chi chu'uan, as an expression of Chinese martial culture, the exploration of body is seen as an approach to the true knowledge of nature of self and life. As a Japanese philosopher Yasuo Yuasa pointed out, “True knowledge could not be obtained just by theoretical thinking, but one need also the ‘body consciousness’ or ‘body awareness’ to achieve it.”³¹

Endnotes

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Knowledge of the World and Art of Life: Based On the “Cultivation of Body”

In recent years, the body has been noticed as an important issue in the theoretical level of aesthetic discussion, whereas it was analyzed by ancient Chinese thinkers in a comprehensive discipline. This paper is to point out the aesthetic significance of the thoughts on “cultivated body”, namely *xiushen* (修身) in Chinese saying.

The core concern of Chinese philosophy and aesthetics is how human body contributes to the formation of meaning both on the level of personality and society. The contribution is linked with the conception of “cultivation of body”. This paper concentrates on two questions: Firstly, how does the “cultivated body” go with the philosophical notion of “mean and familiar” (*zhongyong* 中庸) and *dao*? “Mean and familiar” was a characteristic ideal of Chinese people, while *dao* summarized their understanding of natural order. Both of the two notions are the key words of Chinese thought and arts. Second, how could the comprehension of *dao*, which is obtained from cultivating body, be expanded to people’s everyday lives? What I have to emphasize is, the Chinese word *shen* (身) has an extended meaning, which goes beyond the individual and corporeal body. Chinese thinkers stressed its aspect of socialization, and thus, “cultivation of body” was not only a training of personal virtue, but also a pursuit of social coordination through certain rites. I will show that “cultivation of body” is also a kind of artistic exercise as well as moral training. Finally, our discussion on “cultivation of body” (or *xiushen*) might have practical implications for intercultural communication nowadays.

In the classical aesthetics thoughts of Confucianism, balance and peace were the most praised aesthetic values. Behind these values, it was the concept of “mean and familiar” (*zhongyong*, 中庸) that characterized the Chinese thought and life.¹

As early as in the 3rd century BC, *zhongyong* had already been an important concept in Confucius classic *The Book of Li* (*Liji*) and became a title of theoretic-

cal essay in it. A thousand years later, when intellectuals of Confucianism faced the idealistic challenge of Buddhism, they began to find a metaphysics ground for their indigenous belief. What they resorted to was the essay of *Zhongyong*. In our time, which is another period of cultural exchange, the notion of “mean and familiar” will still be an important resource of interflow and creativity on thoughts. However, I would rather avoid the metaphysical interpretation so as to discuss the possibility of understanding through everyday lives of common people. Such possibility, I think, lies in the wisdom of reflection of soma and the practice of cultivating body.

Simply speaking, the so-called “mean” (*zhong*) names a condition in which all sorts of emotion, thoughts and practice are exactly appropriate, neither excessive nor deficient. The “familiar” (*yong*) is the effect of the “mean” (*zhong*). That is to say, when an action reaches its most appropriate point, it just appears too ordinary to be praised. Chinese intellectuals always admire a talented politician who finishes a difficult task in such a way that nobody is even conscious of his contribution. Thus, “mean and familiar” is regarded as the feature of the universe and the most talent sages, far beyond the extent ordinary people could reach. The question is, what holds us from doing difficult things with easy and familiar manner?

Let’s look at the explanation in the essay:

The master said:

Everyone is saying, “I am wise”, but being driven forward they run headlong into nets, traps, and pitfalls without any of them knowing how to avoid them. Everyone is saying, “I am wise”, but having chosen to focus on the familiar affairs of the day, they are not able to sustain this for even the duration of a month.

This section explains the difficulty of “mean and familiar” as such: one always loses it shortly after obtaining it. Hence, the question above transfers to the following: why does one lose his/her knowledge of “mean and familiar” which lies in the ordinary life? And further, how to avoid losing it?

Let us begin with analyzing the meaning of *zhong*, which means “mean” as well as “center” and “hit the target” in Chinese. Apparently, it is the appropriate point that is between excessive and deficient. It reminds us of Aristotle’s definition of “good”. In this famous analogy, “good” was compared to an average number (for instance, 6 is a center point between 10 and 2).² Besides this geometrical and static understanding of “mean” and “center”, Chinese would rather consider it dynamically, that is to say, they link it with action and choice in a process. For example, in the center mainland of China, people still use *zhong* to judge a proper manner, decision, thought and so on. This also reveals the real

difficulty of “mean”: people can’t catch the very “center point” between the two endpoints, because one of them always stays in the future, and is vague to the decision maker. That’s why people, from daily choice to policy making, always run to an extreme shortly after another. Thus, as Confucius said, people lost the virtue of *zhong* for a long time. He even said: “Even the world, its states, and its clans can be pacified, even ranks and emoluments can be declined, and even flashing blades can be trodden underfoot, but focusing on the familiar affairs of the day--this is no easy matter.”

This section points out that one can put all efforts in resolving any problem with certainty, whereas has no idea what to do to pursue the very center point that is between one end at present and the other end in the unseen future. From this point, we have to admit that *zhong* is just a myth as no one can predict everything.

However, Chinese thinkers proposed a feasible way of solving the “difficulty of *zhong*”. They returned to comprehension through action of human body. Laozi, daoism philosopher, said “cultivate it in your person, and its virtue will be genuine”³, and *The Book of Yi* also stressed “think it nearby” as a method of discovering the connection between metaphorical symbol and reality. In the essay of *Zhongyong*, it teaches “in travelling a long way, one must set off from what is near at hand, and in climbing to a high place, one must begin from low ground: such is the proper way of exemplary persons.” All these thoughts are by no means mysterious. Let us go back to our daily experience. As soon as I want to drink a cup of tea, my hand usually happens to be at the right place to hold the cup, neither back nor forth. So I put it under my mouth and drink it. It shows that, to a certain extent, the movement of body indicates a kind of foreknowledge, which ensures that a person will overcome the uncertainty of the future. Inspired by such a simple phenomenon, Chinese thinkers were to link the commonest manner, which is “familiar”, to the most ingenious operation, which is “mean”. They admire those who can solve the most difficult in the plainest way, like a saying that “so easy as turning one’s hand”.

Just now I emphasized that the foreknowledge of the body takes effect to a certain extent. The extent depends on the scope of a person mastering his/her body. Common people, called *min*, can only be competent in basic daily work, whereas talented and well-trained people, called *junzi* or *shengren*, manage to extend their ability to everything as far as possible. The essay of *Zhongyong* points out that Shun, the legendary sage and king, could keep the condition of “mean and familiar” by means of perceiving any little sign of change which was overlooked by other people. Here lies the target and method of ancient Chinese education: help people keep the understanding of “mean and familiar” through physical training, and further, help people extend such understanding to more

ingenious and creative affairs through more sophisticated exercise, for example, the rites combined with singing, dancing and even military training.

Here comes the question of why we lose our “mean and familiar”, or *zhongyong*, in most decisions and choices? Let us go back to drinking tea. Normally, I have no problem to get the cup and pour water into my mouth in a series of accurate body movements, but in some special cases, drunk, raged, agitated for instance, I may knock the cup over or pour the water onto my clothes. It is emotion that interferes with our body and mind. This is more evident in complicated actions. Daoism’s classic Zhuangzi provided many examples: in a competition of archery, the amount of stakes might deeply influence contestants’ performance – they played well when the stakes was ordinary goods, felt nervous when compete for valuable luxuries, and got dizzy when the stakes was as high as a gold bar. In another case, as Zhuangzi demonstrated, two contestants who were equal in skill of archery, played totally differently when one of them proposed to change the venue, at the edge of a sheer cliff. In *Daxue*, another famous essay of *Liji*, a Confucian said “body may lose its appropriate condition when it is influenced by anger, fear, excite and anxiety”. For the ancient Chinese, both Confucianism and Daoism, there was no intrinsic evil or sin in moral fault, but only deviation from normal or appropriate point. Such deviation is mostly the by-product of precarious mental or emotional condition. Thus, the aim of moral training and aesthetic education is to make people get rid of emotional disorder and then come back to the “mean and familiar”.

In the area of Chinese belief, moral and aesthetic, there is a deep rooted tradition which advocates “attribute everything to yourself” (*fan qiu zhu ji*, 反求诸己). That’s why both Confucianism and Daoism (which differed in many points of view) were apt to the archery analogy. They found a similarity between mental-conduct training and the game derived from military training which combined skill, rite, and most importantly, awareness that attributes both success and failure to oneself rather than to opponents or casualty. Being successful in the game or not, indicated mental and physical condition of a person. As a consequence of such analogy, Chinese people paid much attention to adjusting their body to *zhong* (中), namely “mean and familiar”, and *zheng* (正), namely correct, right, proper, accurate. As an example, we may find in the classics that Confucius refused to eat when the shape of food was not correct.⁴ It should not be regarded as an obsessive habit, because Confucian rooted his understanding of virtue and world order in the familiar habit.

It involves a more concerned question: how can people extend their understanding to a large scope? What is first to be noted is, “body” in Chinese culture and thought is not only corporeal, material and passive fresh, but mainly a kind

of living thing, and also a starting point of forming the meaning of the world. Since meaning is forming in the process of communication, the “body” in Chinese sense is defined by the living body’s communicative function. Then, said about body, Chinese people pay more attention to the socialized ego open to each other, rather than the property of an isolated entity or a container of so-called “soul”. It is manifested that Chinese people highly stress the manners of communication, such as tone, gesture and face-expression. Confucian teachers used to emphasize the expressive *se* (色), which literally means “color of the face”. Similarly, when an artist describes bodies, they also place more stress on expression, gesture and manners than on shape, structure and physical movement.

As the starting point of meaning formation, a “living body” in Chinese sense concludes not only natural body, but also the tools at hand, its surroundings, acquaintances, even ancestors which are all immediately related to the function of this living body. Since the appearance of the whole world is more or less a projection of living body, theatrical thinking, moral training and art presentation are marked by such extended “body”, and the framework of this culture is characterized by “cultivation of body”.

In this article, I propose that the socialized and cultivated body is an overlap of philosophy, moral thought and art, and thus an important issue of Chinese aesthetics. In further research, I will discuss several schools’ arguments on it. Here is to point out briefly its significance on observing today’s internationalized aesthetic phenomena. First, the philosophical reflection on the body in context of Chinese thought may contribute to break the false dichotomy between essence and phenomena, spirit and material, rationality and emotion, and so on, and help people to rethink the relationship between cognition, morality and appreciation of beauty and art. Second, the lived and cultivated body placed in the framework of culture and communicative activity may help us eliminate the conceptual misunderstanding in cross-cultural interaction. These two points may be a contribution of Chinese aesthetics.

Endnotes

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- was sometimes used separately, and thus translated as “Mean,” “Middle” and “Center”. Here, I follow the “Mean” translation, but keep the distinctive term in quotation.
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 4. The Analects of Confucius (*Lunyu*), section 10, chapter 8.

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4

Bioart and
Biotechnology

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The Poetic Possibilities of *Ge-stell*

The following considerations are the result of the exposition *Sin origen/sin semilla* (*Without origin/seedless*), the first biotech and transgenic art exhibition in Mexico. We carried out this montage as a product of the debates and work in the permanent Seminar of the group Arte+Ciencia, based at the UNAM in the Faculty of Philosophy.¹ Although one of the central philosophical problems in this exhibition was the conceptualization of the artefactual,² I have considered that some of the secondary topics deserved more attention, as they are fundamental in the debates concerning the biotechnological arts, e.g. the relevance for art practice of constructing nets of knowledge while producing the pieces and the montage, the use and abuse of sci-fi imaginary, the preeminence of the media in these art pieces and even whether the technical and scientific information should be abundant and in the exhibition and where to put this information.

Here I want to address the role that philosophy of technology could play in the development of a critical approach to biotech art. The main reason for this rests in the suspicion that the current horizon for reading bioart lacks tools to locate the art pieces in an economic and discursive regimen dominated by global production, scientism and a reductionism through Informatics.

The delimitation and historization of artistic practices with live media remains an open issue. However, in spite of the newness of the debate, it is possible to locate already opposing views and open discussions between leading authors. Particularly, one of the lines to distinguish the positions is the place in which the theorists locate themselves with regard to the claim that bioart works with the living entities as if they were an artistic medium, that is, a medium in a more or less conventional sense.

Thus the conceptual framework I am referring to is the important development of media theory that decided to include living material as part of the new

media, e. g. the texts of Eugene Thacker, Robert Mitchell and Jens Hauser, among others. These authors come from the tradition started with the commentaries about the materiality of media done by Kittler and Gumbrecht. On the one hand, the former used Derrida's thesis to underline the constructions of the message through the materials in which it is inscribed.³ On the other, Gumbrecht proposed to save the difference between presence effects and meaning effects, which opens the possibility to undermine the hermeneutic turn, that had invaded Humanities and Social Sciences.⁴ Although he argues that these critics are neither systematic nor radical,⁵ and even uses Heidegger to sustain his arguments, his text influenced Jens Hauser,⁶ one of the most important curators of bioart, who is constantly asking about the materiality and the mediality in art practices that involve biotechnology.

This preference for talking about the production of presence and the effects of it, does not avoid to address technological and political topics. Nevertheless, they do not have the preeminence they deserve. Art practices with technology do not *eventually* involve the questions for the modes of productions, but rather constantly address them, and I am saying this in two senses: the way beings are produce by the essence of modern technics (Heidegger) and the distribution of work and means of production (Marx).

In this presentation I will try to explain in which sense I suspect that by focusing on the biomedias as common media lead us to limited positions in regard to the horizon of biotech. My thesis comes from a critical reading of Heidegger's philosophy of technology. However, I will not argue that biotech projects involve only an "enframing" of beings. Such an opinion rests on a rather bucolic point of view. Still, Heidegger gave us a powerful insight to rethink and contextualize techno-science: a hermeneutic of conjunct practices that produce truth (meaning).

In comparison to the philosophies of technology engaged with isolated technical objects, or with the phenomenological analysis (that only deals with the perspective of the user), Heidegger pointed out that technics work together in placing times and spaces: the essence of Technic produces ontological specificity as a structure. This perspective allows for displacing the problem of technology from the naïve approach that depends on the preeminence of the intentionality of the maker. A good example of such an interpretation of the artefactual could be found in the work of Keekok Lee.⁷ She deals with the traditional Aristotelian schema of four causes (material, formal, efficient and final) for criticizing deep technology, as far as it lies in the possibility of repurposing life as a whole according to the ends of humanity, which would result in a narcissistic society. The difference between technologies depends of the knowledge of the maker (efficient cause), but avoids positing the importance of the non-technological activities

in the production of this knowledge. In consequence, what she misses is the dependence of technological developments on economic growth, scientific ideologies or even the implicit technics (not technologies) of knowledge-production.

On the other hand, phenomenological approaches to technology, like the one of Don Ihde, lack the definition of a genealogical moment in their analysis. The description of the use of artifacts forgets to question how common practices came to have their actual determinations.⁸ In other words, by focusing in the user-artifact dyad what is concealed is the way this same pair was produced. Again this is only an interpretation of objects, and the consequent omission of technical practices that lead the way those objects are produced.

This absence could be clearly detected in Heidegger's inaugural analysis of phenomenology of technical artifacts in *Being and Time*, i.e. ready-to-hand-being. Although he purposed himself to destroy Metaphysics, as a historical reading of a being that turned to be naturalized in the common comprehension of ontological questions, he decided to explore just traditional artifacts (e.g. hammer, shoes, chairs etc.), and avoided to describe the complex system of modern societies and their technical and technological pillars. That is why Heidegger changed his interpretation of technics in *Die Frage nach Technik*, where artifacts are located in a broader productive structure.

Thus Heidegger's late approach asks for a prior genealogy or destruction of the naturalization of the map drawn for the specific technologies. That means that we should try to clarify how our daily praxis and understanding are produced by technics. And regarding art practice, I believe that besides interpreting the different ways presence is produced, and how the materiality informs the message (media approach), it should be also thought how non-technologically activities collaborate in the production and interpretation of art works.

Working with bioart, thinking in biomedica

The map of authors and artist that address art practices involving biotechnology could be started with George Gessert. He claimed to have taken the term "genetic art" in the 80's to refer to the early work with plants, which was been developed before World War II by Steichen.⁹ With "genetic art" Gessert intended to appropriate a phrase that computational art had occupied to discuss electronic self-generated events. Two differences could be found however between computational art and genetic art: there are no algorithms but the DNA process, and genetic material could be addressed either explicitly or implicitly.

This lead to a problematic conclusion: even if an artist is not aware of new life sciences, when she or he uses living being or tissues in traditional methods

(planting, hybridization or breeding), the result should be located under genetic art. The problem here is not the omission of artists' intentions, but rather the systematic replacement of any interpretation or bound to life with genetics and molecular biology.

Eduardo Kac has been more precise when indicating that bioart should be understood as “art in vivo”, that is, art with biological processes. Therefore he prefers to use the term biotech art.¹⁰ He discards bioart then any traditional media art practice, such as painting, photography, clay or wax, and reserves this concept for artistic practices that use laboratory techniques of the new science of life to transform live matter into an artistic medium.

The definition of bioart by its media allows for the development of the perspectives of Eugene Thacker and Jens Hauser. Here the media theory meets biotech art in order to understand the particular materiality of these artistic practices. But there was still missing an appropriate link between them, which is to be found in a special condition of the living media: they are not static matter, but an array of processes, i.e. developments that tend to naturally produce proteins, tissues, structures, etc. The use of those processes for artistic ends theoretically means to repurpose their natural ends. Having this in mind, the biomedial theorists decided to add to their reference list, which began with Kittler and Gumbrecht, the book *Remediation* by Bolter and Grusin. There the authors explore the logic of de-contextualize and contextualize of media. In their own words:

[W]e call the representation of one medium in another *remediation*, and we will argue that remediation is a defining characteristic of the new digital media... Each act of mediation depends on other acts of mediation. Media are continually commenting on, reproducing, and replacing each other, and this process is integral to media. Media need each other in order to function as media at all.¹¹

In spite of what it might look like, Bolter and Grusin do not intend to delete reality from the cycles of remediation. They assure that the real is what involves itself in those cycles. Thus, remediation is not just repurposing logic of the media but of the real.¹² The living matter would be integrated thus in the same logic of media as far as it could be biotechnologically repurposed. The lab technics would enable remediating the natural processes (e.g. DNA replication) in order to reform life.

As Robert Mitchell has pointed out, this thesis tries to link two senses of the word “medium”, i.e. a medium as communication and medium as a growth condition. Although he is a critic of the definition of bioart through its media,¹³ he posits that art that uses biotechnology plays with the possibilities of turning the living processes into meaning carriers.

Following Simondon, Mitchell explains that media are the conditions of innovation and stability for an individual. In particular, living beings have a dynamic relation with this media that allow them to adapt and evolve. Art practices then integrate the gallerygoer to these dynamic processes: the visitor acknowledges herself or himself as a potential medium for the living entity she or he is observing. The example Mitchell uses to sustain his interpretation is often the collaborative work of Beatriz da Costa and The CAE *Transgenic Bacteria Release Machine*, where gallerygoers are invited to release transgenic *E. coli*. This action, though pretty intense, is in fact harmless, as the air (medium) would almost immediately kill the bacteria.

Finally, the biomedial theorist are aware that biotechnology does not imply only living matter, but that the digital moment plays a fundamental role in the repurposing of living processes.¹⁴ In fact, Eugene Thacker goes to posit that biomedial work in a narrow resemblance to the digital media, as they function thanks to the repurposing of live material in computational, pharmaceutical or artistic contexts, and by doing so, they follow Manovich's schema of encoding-recoding-decoding.¹⁵ With regard to what it seems, this informative processing of life does not redound to Thacker in a new "enframing" of the living. Against what a Heideggerian might say, he argues that it is a true potentiation of the living matter as such. Thus biomedial would be material media that permit other purposes.

Philosophy of technic and poetic possibilities in biotech art

Here we could point to the critical interpretation of Nicole Karafyllis, who rejects the supposition that bioart could in fact subvert the instrumental purpose that the biofacts of science already carry within. For the German philosopher, bioart maintains not always a critical approach to the work in the lab. In fact she suggests that artists collaborate with the paradigm of new science, i.e. the science that gets funding through international corporations and even plays a role in the so call biopiracy. Biomedial theorists would only see how living matter could be poetically situated, or reactivated in art contexts. On the contrary, the origin of the technical possibilities does not reach the spot light.

The comments of Karafyllis are related to certain new-Aristotelian perspectives as far as she uses the repurposing or final cause as the core of the critic. But in regard to her critic of bioart, she prefers to use Arendt's distinction between action, work and labor. Biotech art does not engage in the production, but rather uses objects from the laboratory, and even tends to mislead the public with wrong statements about scientific research. Consequently, these artists should

be regarded as *homo laborans*, and as workers or producers, a characteristic that ought to be hand in hand with art practices.¹⁶

However, the central criticism of Karafyllis does not lead immediately to the conceptual framework of Hannah Arendt, but rather to the definition of aesthetics as dissolution of the Aristotelian final cause, which leads to experiencing the art work as a non-teleological or free game. In other words, the critiques on biofact in regard to their instrumental character relate to modern aesthetics, at least in the preeminence of the understanding as an “artifact” that has subverted its instrumentality.

In particular, the determination of aesthetics as subvention is based on the works of Hegel and Nietzsche. Both of them struggled to explain how artworks work against the established morals (*Sittlichen*), diminish the absolute point of view implicit in them and permit to posit new interpretations of the world. If we were to believe the interpretation of Christoph Menke in this very issue, Hegel and Nietzsche encourage the idea that daily praxis and moral contradictions are “re-presented” in art as mere positions in a game. In Hegel’s view, these morals are even dialectically linked. Art produces then a space where the naturalized praxis becomes fiction or mere possibility among many other possibilities.¹⁷

Karafyllis would say (at least I think so) that bioart projects fail in setting the biotech as a mere position in the game of bioartefactuality. And because of that, she will posit that what is needed here is a genealogy of technologies, that is, a critical dissolution of the naturalization of technology. If this were the case, I could not agree more with Karafyllis. Nevertheless, I believe that a genealogical destruction of the meaning of technologies would not lead to any reconstruction of the work of art. We will be not able to comprehend how works join (*versammelt*) in meaningful actions the different things and practices that they imply. Also, if we were to take this genealogy seriously, we would be even having problems to draw the relations between technology and science. As Nietzsche posited in *Gaya scienza*, genealogy should be counterpointed with an interpretation that might produce truth, otherwise the critical approach will end up destroying itself.

At this point I would suggest reading again Heidegger’s essay on technics. Because it is possible to find an unexpected hermeneutic, or at least a way of doing hermeneutics that I think has not called enough attention. There Heidegger managed to explain at once the destruction of the phenomenological data of “usefulness” of the ready-to-hand-being and the production of a network of technical practices, secularization of the culture and development of science. Thus he substituted the phenomenology of artifact for a *Destruktion* of the natural attitude towards instruments, and combined it with a theory about the

production of the truth of being through the same practices that generated such a “natural approach”.

The result was the well-known *Ge-stell*, which stands for an epoch, as well as an immanent structure. But this structure does not work exactly as an *a priori* structure. The reason is not because it is an historic one, but rather because it is built up by the same practices that it structures: there is no *Ge-stell* without the practices that performs it. This might be understood if we focus the analysis on how Heidegger explained the meaning of the word *Ge-stell* through word *Gebirg*. He pointed out that in the latter word the prefix *Ge* implies the conjunction (*Versammelnde*) of several mountains. An array of mountains is both a form and a thing; it is a structure that gives a meaning to different rocks and picks.¹⁸ But the production of this meaning is due to the same different parts working together with and from their own differences. This is also valid for *Ge-stell*, and it shows a very important possibility to do hermeneutics.¹⁹

The conjunction of the differences might look like several media that reciprocally mediate each other. But I think this interpretation would be a mistake. First, because we would lose the specificity of the concept of mediation, i.e. if everything is a medium, then nothing is. Secondly, because being conjunct does not mean being mediated. And the reason for this is that the differences of the conjunct parts neither disappear nor are dialectically modified. And also because these conjunct parts do not allow the communication of a further message – they are not working together to represent something else. The representation is just a moment among many other relations in the production of art. In fact, the generalization of representation is problematic in itself. Instead of representation we have constellations. But even further, instead of presence of the materiality of media, we become aware that the conditions of production of that materiality are in fact concealed.

In conclusion: the model of hermeneutics in *Die Frage nach Technik* helps us suggest a critical approach to bio-art and to media research. Instead of dealing with the suspicious dyad of representation and presence, Heidegger’s model rests in an array of actions and relations. Bioart thus should be interpreted as a product of work, conflict of interpretations, the growth of beings, the construction of the biotechnological matter, the use and appropriation of tropes, the produced affects, among others. So, in bioart aesthetics the discussion should avoid the predominance of the media over biotech art and the preeminence of the question of artefactuality. In other words, I consider that art practices are better understood when we try to capture how they join (*versammeln*) different issues at the time they change the limits between them, and this is not only valid for bioart, but rather for art practices in general.

Endnotes

1. See <http://www.artemasciencia.com/exposinorigen/>, access: December 10th, 2013.
2. The curatorial line, which stress the theme of artificiality, could be found either in the web page of the exhibition or in María Antonia González Valerio and Liliana Quintero “*Sin origen/sin semilla*”, *Alebrije. Monstruo de papel*, supplement of “Artes de México” magazine, March 2013.
3. Cf. F.A. Kittler, *Gramophone, Film, Typewriter*, trans. G. Winthrop-Young and M. Wutz, Stanford (California): Stanford University, 1999.
4. Cf. H. Gumbrecht, *Production of Presence What Meaning Cannot Conuey*, Stanford, (California): Stanford University, 2003, p. xv.
5. *Ibid.*, p. xvi and 2.
6. J. Hauser, *Toward a Phenomenological Approach to Art Involving Biotechnology*, [in:] *Tactical Biopolitics. Art, Activisme and Technoscience*, eds. B. Da Costa and K. Philip, Massachusetts: MIT, 2008, pp. 89–91.
7. K. Lee, *The Natural and the Artefactual. The Implications of Deep Science and Deep Technology for Environmental Philosophy*, Lanham, MD: Lexington Books, 1999, p. 54.
8. This statement must be eventually nuanced, because the dynamic character of the phenomenology of Husserl belatedly led him to propose the generative Phenomenology, which emphasizes the process of becoming.
9. G. Gessert, *Green Light: Toward Art and Evolution*, Cambridge (Massachusetts): MIT, 2010, p. 120.
10. E. Kac, *Art that Looks You in the Eye: Hybrids, Clones, Mutants, Synthetics, and Transgenics*, [in:] *Signs of life. Bio Art and beyond*, ed. E. Kac, Massachusetts: MIT, 2007, p. 11.
11. J. D. Bolter and R. Grusin, *Remediation*, Massachusetts: MIT, 2000, pp. 45, 55.
12. *Ibid.*, p. 56.
13. Mitchell decided to define bioart works through the relation they have to the problematic of biotechnology (the shifting relations between inorganic matter, living beings, human institutions and relations). He posited then prophylactic and vitalist bioart; the former separates and protects biotechnologies from the gallerygoers to address the problematic, whereas vitalist art, on the contrary, tries to involve the visitor with living processes. This taxonomy does not coincide with Kac’s division, as far as some vitalist works, due to its nature, could not be montaged in a gallery or even be in touch with the visitors. Mitchell’s example for this is the photograph – 86 *Degree Freezer (Twelve Areas of Crisis Concern)* by Catherine Wagner. This work uses the image to link the gallery and the actual lab, which otherwise would be impossible, as far as the depicted Freezer could not be placed outside the lab – R. Mitchell, *Bioart and the Vitality of Media*, Seattle: University of Washington Press, 2010, pp. 27–31. Even though I acknowledge that Mitchell’s tactic for defining bioart is quite sharp, in my opinion it ends up in a choosing-sides-scenario, where the diversity of poetic possibilities and concepts are reduce to being in favor or against biotechnology.

The Poetic Possibilities of Ge-stell

14. In particular Polona Tratnik regards bioart as a postdigital art practice. Cf. P. Tratnik, *Jugar con una presencia viva: el bioarte*, trans. M.A. González Valerio, "Intersticios", año 16, no. 34, México, enero-junio, p. 123.
15. E. Thacker, *Biomedica*, Minneapolis: University of Minnesota Press, 2004, pp. 16–26.
16. In words of Karafyllis: "Mein Argument an dieser Stelle ist, dass die Biotech Art die ohnehin problematische Trennung von Arbeiten (labor), Herstellen (work) und Handeln (action) (Arendt 1998) zumeist unkritisch reproduziert, weil sie stets mit dem Vorgefertigten aus dem Labor etwas herstellt, das aber kein klassisches Werk der Hände mehr ist. Der BioArtist verkörpert vom Menschenbild her – in den Termini von Hannah Arendt ausgedrückt – eher das animal laborans statt den homo faber. Hierzu passt übrigens auch der künstlerische Fokus auf das Tier, der uns gleich noch beschäftigen wird." N.C. Karafyllis, *Biofakte der Kunst. Die philosophischen und gesellschaftlichen Herausforderungen der BioArt*, [in:] *Pros bíos*, eds. M.A. González V. y L. Quintero, México, CENART-UNAM (in press).
17. Ch. Menke, *Conflicto ético y juego estético. Acerca del lugar histórico-filosófico de la tragedia en Hegel y Nietzsche*, "Enrahonar", Barcelona, 32/33, 2001, pp. 217–218.
18. „Was die Berge ursprünglich zu Bergzügen entfaltet und sie in ihrem gefalteten Beisammen durchzieht, ist das Versammelnde, das wir Gebirg nennen. Wir nennen jenes ursprünglich Versammelnde, daraus sich die Weisen entfalten, nach denen uns so und so zumute ist, das Gemüt". – "Wir nennen jetzt jenen herausfordernden Anspruch, der den Menschen dahin versammelt, das Sichtenbergende als Bestand zu bestellen – das *Ge-stell*". – "Wir wagen es, dieses Wort in einem bisher völlig ungewohnten Sinne zu gebrauchen [...]. *Ge-stell* heißt das Versammelnde jenes Stellens, das den Menschen stellt, d. h. herausfordert, das Wirkliche in der Weise des Bestellens als Bestand zu entbergen. *Ge-stell* heißt die Weise des Entbergens, die im Wesen der modernen Technik waltet und selber nichts Technisches ist." – M. Heidegger, *Die Frage nach der Technik*, [in:] idem, *Vorträge und Aufsätze*, Frankfurt Am Main: Vittorio Klostermann, 1954, pp. 20–21.
19. He also uses this example in the conference „Das Ding“, *ibid.*, p. 173–174.

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Brain Incorporated into the Machine

About a century ago, Henri Bergson, for example, disputed the notion that total correspondence between the brain and mind states exists. Until date, no one has demonstrated total correspondence and as such, this notion remains only a “hypothesis.” However, whether or not total correspondence between the brain and mind states can be demonstrated, we are increasingly finding ourselves in situations in which brain wave data or cerebral blood flow is “perceived” in detail (e.g., functional brain imaging and mind reading), prolonged to “action” (e.g., brain machine interface and brain computer interface), and fed back to “affection” (e.g., biofeedback and neurofeedback). What kind of new circuit can we construct between the brain-data and “us”? How do such new circuits transform our experiences? Toward addressing such questions, this paper focuses mainly on *Necomimi* (2011), a popular neurotoy produced by the Japanese creator team, Neurowear.

Necomimi is a piece of equipment with the shape of cat’s ears that utilizes brainwaves and, according to creators, “expresses your emotional state before you start talking” through the motion of cat’s ears on your head. This gadget, based on a popular Electroencephalography (EEG) system produced by an American company, fulfills the desire of high-tech fans as well as that of costume players. Located on the boundary between the real world and the possible world, it makes us not only look back upon the history of the desire of becoming a cat – or becoming the other – which is latent in popular culture, but also imagines the future culture where the technology intervenes in our brain directly. If Eduardo Kac’s *GFP Bunny* is an icon of bioart, *Necomimi* might be a pop icon of neuroart, promoting our critical thought on neuroculture.

This paper aims to present the first step toward aesthetics exploring the role of experience in evoking new arrangements of perception, affection, action,

and memory through neurotechnologies. An additional goal is to contribute to future research on media archeology.

1. Mind and brain

In recent years, brain function imaging technology has improved dramatically, leading to constant new insights into human mental phenomena and mechanisms. This often leaves us, the world outside research, with the illusion that everything can be explained through the knowledge of neuroscience. However, quite a few neuroscientists and philosophers agree that the mind-brain problem does not have a simple solution or perhaps cannot be solved in principle. In this sense, the researchers of humanities would not lose their work for a while, even if, for example, the biological approach to aesthetics has improved dramatically.

Over a century ago, the famous philosophers, Henri Bergson, promoted critical thinking about the mind-body problem. Bergson was a philosopher who considered the relationship between observable third-person data and first-person experience in a radical way. Patrica Pisters writes as follows.

Just as cotemporary neuroscience makes a distinction between the Easy Problem (the mapping of material correlates for specific functions of the brain, which is now possible with all kinds of brain-scanning instruments [...]) and the Hard Problem (how does consciousness arise? How does brain enable the mind?), Bergson makes clear that even if we would understand and map the brain perfectly, this would never be enough to explain the experience of consciousness nor to grasp intuitions of the changes and improbabilities of human consciousness that are more than its cerebrality.¹

In his day, Bergson argued that “the nervous system is in no sense an apparatus which may serve to fabricate, or even to prepare, representations.”² He considered the function of the brain limited to enabling communication of movement between sensory and motor systems. Thus he wrote, “The brain is no more than a kind of central telephonic exchange.”³ However, even Bergson would have to admit that recent neurotechnologies have made leaps, try to construct pathways of such movement, and show the possibility of transforming our experiences.

According to Ryohei Hasegawa, neurotechnology (“the research to utilize the brain”) has been active in Japan since the 2000s⁴ (One of the most famous developments in this field is brain machine interface (BMI), a system that directly translates brain-data into actions. In Japan, BMI is known to the public, for example, by the special NHK program, entitled *Cyborg Technologies Transform the Human*, directed by a journalist, Takashi Tachibana, and released in November

2005. One of the founders of Neurowear, the creator team of Necomimi, told in an interview that this TV program was influential.⁵ For the neurotechnology industry, whether or not total correspondence between brain and mind states can be demonstrated is a secondary problem. The primary concern is how to utilize the information of the brain.

Bergson viewed our body-brain as a kind of center of indetermination in a world consisting of pure non-central movements of matter. As Gilles Deleuze summarized in his cinema book:

[...] movement-image [of the matter] dived into three sorts of images when they are related to a center of indetermination as to a special image: perception-images, action-images and affection images. And each one of us, the special images or contingent center, is nothing but an assemblage of three images, a consolidate of perception images, action-images and affection images.⁶

From this perspective, we can say that neurotechnologies directly intervene with our center of indetermination and produce a new arrangement of perception-images, action-images and affection-images.

- o. Perception-image: technology to perceive brain state. Technology such as EEG, positron emission tomography (PET), magnetic resonance imaging (MRI), near infrared spectroscopy (NIRS), and research that might be called “mind reading” or “mind decoding”. For example, the cover image of “Neuron” no. 60 (2008), which illustrates a visual image reconstruction from the human brain, is quite impressive.⁷
1. Affection-image: technology to control body or emotional state, using brain data. Deep brain stimulation (DBS), Biofeedback or neurofeedback.
2. Action-image: technology of prosthesis, concerning sensory-motor mechanisms. Cochlear implant, artificial retina, BMI and brain computer interface (BCI).

Although our classifications are made for the sake of simplicity, there may be some overlap between them. For example, affection-image might include perception-image (i.e., to control body states by using brain-data, it is necessary to perceptualize brain-data). In addition, action-image might include both perception-image and affection-image (for example, to use the BMI, it is necessary to perceptualize users’ brain states and to control them).

We can also classify practices using the brain-data, which might be called “art” on this map.⁸ While Necomimi is classified as “affection-image,” as far as neurotoys are concerned, devices such as *Mind Flex* or *Star Wars Force Trainer*

would be classified as “action-image”; despite these differences in classification, all the three neurotoys use the EEG technology from the same company.

2. Future emotional neuroculture represented by Necomimi

Here, I would like mention the concept video of Necomimi, which was uploaded on YouTube in April 2011 and received 3 million views. A prototype of Necomimi was exhibited initially at Tokyo in April 2011. It seems that the product was targeted at the global market. The English version of the website and the Facebook page were available for the first time, and English subtitles have been added to the video. Then Necomimi was released for sale in April 2012.

As soon as the prototype was introduced at the first exhibition and the concept video was uploaded on YouTube, many people around the world were amused by their idea. As early as November 2011, Necomimi was selected as one of the 50 best inventions of the year by “Time Magazine” (vol. 178, no. 21, November 28, 2011). It was also selected for a Jury Selection in the entertainment division of the 16th Japan Media Art Festival (2012) and an Honorary Mention in the interactive art category of the 2013 Prix Arts Electronica.

The theme of the project was “communication in the near future.” The Neurowear creative team researched a new type of communication without language and focused on communication using brain waves. According to an article on the website, the planer of Necomimi, who was shy and sometimes had difficulty expressing her emotions, proposed the idea of connecting an EEG device to kitten ears. She said, “In the office, you can’t see the faces of workers because of the display. But you can know the workers’ feelings. The cats’ ears express them. Isn’t it amazing?”⁹

This gadget, with its seemingly new technology has attracted not only costume players and anime or manga fans but also the wider public.¹⁰ The creators demonstrate the concept with the instructions, “Just put on Necomimi, and if you are concentrating, this cat’s ear shaped machine will rise. When you are relaxed, your new ears lie down.” If the claims are true, Necomimi can augment, amplify or substitute the expression of affect, which Deleuze defined as “a series of micro-movement on an immobilized plate.”¹¹ Of course, it is also the characteristic of a Face itself. The prosthetic affection-image is the main feature of future neuroculture *represented* by Necomimi. Neurowear says, “Necomimi is the new communication tool that augments the human bodies and abilities.”¹²

Here, I would like to mention another video clip. The *Neurowear shippo/brain-controlled tail concept movie* was updated in September 2012. The video says, “A shippo tails waves with your mood” ; “A neural map read your mood...

and tags it to your location”; “Share your mood socially”; “Search for places that many people found relaxing”; “Create a new world by neuro tagging map”.

Neurowear gives the user the fictional background of the gadget. The concept is clearly presented in the video clip. We want to focus on two points here. First, this video clip presupposes the stereotypical notion that there is close correspondence between the state of the brain and that of the mind. Second, this video describes future society, where personal emotional states – satisfied, worried, happy, loved etc. – are registered to a network and shared with other people.

Takamitsu Yamamoto and Hiromitsu Yoshikawa pay attention to the combination of neuroengineering and a society of control in their book entitled *Body-Brain Problem*.¹³ The concept video of Shippo (tail) represents a future society where even emotional states would be inscribed in networks. The combination of brain centrism, neurotechnology, and society of control is a political issue in the contemporary world. The concept video of Shippo represents all elements of such a combination, although on the superficial level it appears as a kawaii video. If the potential of such technologies are realized, people will not be able to distinguish first-person emotion (experience) from third-person emotion (data shown by the device) and will be controlled by the emotional data of the others inscribed in networks. It is interesting to speculate that such a situation has already been in part realized because of the influences of social networking media. The difficulty of societal control is that each member of society cannot be aware of what he or she is controlled by and how he or she controls the others. The video shows only fictional background of the gadget. But in fact, researchers in neurotechnology plan to accumulate brain data on cloud and use BMI for people who need medical care.¹⁴ Futurist Ray Kurzweil, for example, envisions that our brain will connect directly to the cloud by the 2030s or 2040s.¹⁵

3. Discussion

Now we must discuss the present situation. At present, the relation between the mind state and the brain state is still indefinite. Many scientists doubt the approaches based on the theory of localization of brain function. The more serious problem is that because the public has too little opportunity to come into contact with science, what is going on in the labs will forever be a mystery to us¹⁶ and it is common that mistaken or at least exaggerated information is circulated.

Some scientists themselves are cautious about the public use of BMI or BCI. Mitsuo Kwato, a specialist of BMI and others, for example, propose four laws of ethics regarding BMI, with reference to Asimov’s three laws of robotics.¹⁷

Akihisa Iwaki

1. No one may use BMI technology for war or crime.
2. Using BMI technology, no one's mind may be read against that person's will.
3. Using BMI technology, no one's mind may be controlled against that person's will.
4. BMI should be used only when the subject confirms that the merit exceeds the danger and risk.

Members of Neurowear explain that Necomimi classifies our emotional states into three categories (concentrating, relaxed, and mixed) and expresses them with moving kitten ears. If that claim is true, the gadget could conflict with the second or third law of ethics above. But in fact, the relation between emotional states and the movements of kitten ears in Necomimi might have only little basis at best. The Necomimi for sale uses a popular EEG device produced by an American company, NeuroSky. This company's EEG device classifies brain-data into two categories: "meditation" and "attention." According to a report by an engineer, EEG of this company may certainly detect brain waves to some extent. However, it is unexplained or unclear which kind of brain wave state is linked with "meditation" and which kind of brain wave state is linked with "attention." NeuroSky keeps this process in a black box. The author of the report concludes that "we are a bit skeptical of these values (meditation and attention), since NeuroSky won't disclose how they work, but a white paper they've released suggests that the values are at least statistically distinguishable from nonsense."¹⁸ When watching promotional videos of neurotoys, a scientist might be expected to guess that neurotoys are influenced by the muscular potential of the face and not by brain waves.¹⁹

In addition, the attempt to express emotion by using brain waves is not very new. In the background of such work, we can find biofeedback research conducted in the 1950s and 1960s in the United States. Biofeedback aimed to control physiological states such as breathing, blood pressure, and brain waves. After J. Kamiya, a researcher in this field, demonstrated a method of controlling α waves using a biofeedback system, such ideas led to the practice of instant Zen and transcendental meditation. In Japan, a kind of *awave* boom occurred in the 1980s. Popular devices concerning biofeedback, such as the Synchro-Energizer or the Light and Sound machine marketed in the United States in the 1980s, were accepted by the Japanese people from the late 1980s to the early 1990s. Some famous media theorists at that time had a strong interest in New Age science and drug culture. As a result, new gadgets like the Light and Sound machine were accepted in conjunction with a kind of *spiritualism*. On the contrary, we are now in an age of *materialism*. But intrinsically, all we have to do is continue

to consider the relationship between third-person data and first-person experience, between brain-body and mind, between matter and memory, between movement and time, avoiding a rapid solution.

In any event, at present (and perhaps in the future, too) we cannot decode any *contents* of thought from brain waves. Thus, we do not have to worry about it, at least for a while. However, if we use BMI, our relationship with the brain might change.

Indeed, the brain changes from day to day without having to use BMI. The brain is always changing, whether you are practicing the way to use chopsticks or learning to drive. [...] Thus, taking this argument to an extreme, one might say that the use of BMI is not that special, and, therefore, there is no reason to worry about it. Nevertheless, a BMI is in fact different in that it directly inputs data into the brain or outputs data from the brain. In some cases, BMI produces artificial circuits in the brain. In most cases, a BMI retrieves information from the brain, processes it, and returns it to the brain in some way. In this wider sense, BMI creates new neural circuits.²⁰

According to the reports concerning the clinical test, the user of a BMI learns first that a particular state of the brain (e.g., neural activity patterns in the motor area) will extend to a particular action (e.g., moving a cursor). In other words, the user learns a new way of utilizing the brain, one that he or she has never experienced (decoding of brain-movement). And when the user practices for some minutes or some hours, he or she increasingly finds him- or herself able to move things just by thinking of doing so, without paying any attention to brain state (recoding of brain-movement)²¹ Although it is said that there are many more problems to be solved, we could say that the user, having mastered a new way of utilizing the brain, is incorporated into the BMI-machine as a part of this machine. As Michael S. Gazzaniga summarizes, “BCIs [or BMIs] ask brain to do something entirely new.”²²

In the case of Necomimi, which anyone can use if he or she wants to, whether we are really in the mood of relaxation or attention is not so important. Rather, what is important is whether our own brain states accord with the device's categories. I myself cannot feel any obvious feedback from Necomimi (for sale) or other neurotoys. However, *if you master controlling the movement of the kitten ears*, that means you have learned a new way of using your brain (or muscular potential of the face or something else detected by the device) and you become a part of the Necomimi machine. As a result, new categories of feeling would be created by the device, as it has been demonstrated in the case of BMI or other prosthetic technologies (e.g. one of the most impressive practices is Neil Harbisson's eyeborg).

Necomimi itself is a commercial product circulated under global capitalism, and we cannot find any critical thinking in this product. Rather, it represents a social cliché, a stereotypic understanding about the relation between brain and mind. But it is a good development if such devices give concrete experience to many people. Through such gadget, we can try to confirm for ourselves the new circuit between brain-data and human beings. Does the device's expression really correspond to the preexisting mood or does it create new categories of human emotion that have never been experienced, or is it only a nonsensical device? Answering these questions would be the first step toward preparing and promoting critical thinking for a future neuroculture in which advanced technology remains at present in the relatively closed scientific world. As Critical Art Ensembles argues, "Experience and pedagogy (doing and thinking) have to occur simultaneously."²³

Conclusion

Let's see another example. A type of new media art entitled *Light/Sound/Brain (Hikari/Oto/No)* was exhibited at the Modern Museum of Art in Kyoto for a few months in 2010. In collaboration with scientists, the artists explored the emotional response to color and sound. Subjects were placed in an environment filled with light, and the blood flow in their frontal lobes was measured using the near-infrared spectroscopy (NIRS) method. According to the artists, this NIRS-based system is constructed to detect the pleasant and unpleasant emotions preceding any cognition; when the system detects a pleasant emotion of the subject, the computer program retains the color on the screen, and when the system does not detect pleasant emotions, the program continues to change colors at random until a pleasant emotion is detected. If it works well, this system has the potential to function as a drug: "soma" in Aldous Huxley's *Brave New World* (1932). A world without unpleasant emotion – is it a utopia or a dystopia?

In actuality, *Light/Sound/Brain* is based on a previous scientific study, which aimed to "develop a near-infrared spectroscopy (NIRS)-based system that recognizes pleasant and unpleasant human emotions based on cerebral blood flow (CBF) in order to understand the minds of patients whose brain function is severely impaired."²⁴ Thus, this work originated in a more recent paradigm of neurotechnologies than that of Necomimi. During the exhibition, over 700 people were able to participate in *Light/Sound/Brain*. Although I myself did not feel obvious feedback, this work also provided us with a concrete experience, and the occasion to reflect on the relationship between brain-data and "us." As the next step, we should ask how emotions are constructed in the actual process

of conducting experiments in neuroscience. Neurotechnology is a medium, which will affect medicine, industry, ethics, the law, and society in addition to its effects on our bodies.

Unlike neuroaesthetics, “a biological approach to aesthetics based on assumption that the brain and the mind are identical”²⁵ our own neuroaesthetics will be based on experimental dualism. Whether people believe in materialism, spiritualism, dualism, identity theory, functionalism, or other theories is a secondary problem for our research. Our principal goal is to examine the relationship between mind and body, between mind and brain, and between first-person experience and third-person data in real social conditions using relevant media and technologies.

Not only the movements of the body, which are relatively easy to control (e.g., movement of fingers and eyes), but also the movement of brain waves or cerebral blood flow are incorporated into the machine as a part, and it categorizes our experience. How does such a situation change our emotion and thought? This is a question that will take a long time of observation and reflection. But if we do not start thinking about it now, when can we address such a question? When neurotechnology penetrates our daily life, it will become our transparent second habitude. Then, no one can question the conditions of one’s experience, as was the case for the inhabitants of Huxley’s *Brave New World*. To cite Deleuze and Guattari:

The object is no longer to compare humans and the machine in order to evaluate the correspondences, the extensions, the possible or impossible substitutions of the ones for the other, but to bring them into communication in order to show how *humans are a component part* of the machine, or combine with something else to constitute a machine.²⁶

Aesthetics might have numerous advantages in addressing such questions.

Endnotes

1. P. Pisters, *Neuro-Image: A Deleuzian Film-Philosophy of Digital Screen Culture*, Stanford: Stanford University Press, 2012, p. 132.
2. H. Bergson, *Matière et mémoire* [1896], [in:] idem, *Œuvres*, ed. A. Robinet, Paris: PUF, [1959] 2001, p. 181; H. Bergson, *Matter and Memory*, trans. N.M. Paul and W.S. Palmer, New York: Dover Publications, 2004, p. 20. Hereafter, I have cited the page numbers of the original texts first, and thereafter the corresponding page numbers of the English translation.

3. Ibid., p. 180; *ibid.*, p. 19.
4. R. Hasegawa, *Brain Machine Interface no genjyo to shorai*, “Denshijyohotsushingak kaishi”, vol. 91, no. 12, 2008.
5. <http://nlab.itmedia.co.jp/nl/articles/1106/17/newso16.html>, access: December 6th, 2013.
6. G. Deleuze, *Cinéma1. L'image-mouvement*, Paris: Minuit, [1983] 1996, p. 97; G. Deleuze, *Cinéma1. The Movement-Image*, trans. H. Tomlinson and B. Habberjam, Minneapolis: University of Minnesota Press, 1997, p. 66.
7. This cover image illustrates an article regarding decoding technologies developed by Japanese researchers: Y. Miyawaki, et al., *Visual Image Reconstruction from Human Brain Activity using a Combination of Multiscale Local Image Decoders*, “Neuron” 60, 2008.
8. Please refer to works, for example, listed in chapter 3 of Stephen Wilson *Art + Science Now* (New York: Thames & Hudson, 2010). We could add the category “relation-image” for the works that promote critical thoughts about the relationship between third-person data and first-person experience, between neuroscientific self and living self. In other words, practices promote meta-technological thought by using technologies at issue.
9. <http://techwave.jp/archives/51759536.html>, access: December 6th, 2013.
10. It is well known that the cat ear is one of the most popular “moe” elements (i.e., signs that induce affective responses) in Japan’s contemporary popular culture, and possibly all over the world. Just as any moe element may be combined with other elements, costume players can combine various costumes with Nekomimi.
11. G. Deleuze, *Cinéma1. L'image-mouvement*, p. 126; G. Deleuze, *Cinéma1. The Movement-Image*, 1997, p. 87.
12. http://neurowear.com/projects_detail/necomimi.html, access: December 6th, 2013.
13. See Chapter 4 – T. Yamamoto and Y. Hiromitsu, *Shinnomondai*, Tokyo: Asahi Shuppansha, 2004.
14. http://www.atr.jp/topics/CNS20121101/cns20121101_ATR.pdf, access: December 6th, 2013.
15. <http://www.techrepublic.com/blog/geekend/kurzweil-your-brain-will-connect-directly-to-the-cloud-within-30-years/>, access: December 6th, 2013.
16. Cf. CAE (Critical Art Ensemble), *Molecular Invasion*, New York: Automedia, 2002, p. 64 (<http://critical-art.net/book/molecular>, access: December 6th, 2013.)
17. M. Kawato et al., *No to shakai*, Kyoto: Kagakudojin, 2010, p. 182.
18. <http://frontiernerds.com/brain-hack>, access: December 6th, 2013.
19. Cf. M. Kawato et al., *No to shakai*, p. 17.
20. M. Kawato, *No no jyoho wo yomitoku: BMI ga hiraku mirai*, Asahishinbunshuppan, 2010, pp. 162–163.
21. cf. L.R. Hochberg et al., *Neuronal Ensemble Control of Prosthetic Devices by Human with Tetraplegia*, “Nature”, vol. 442, 2006.
22. M.S. Gazzaniga, *Human: The Science Behind What Makes Us Unique*, New York: Harper Collins, 2009, p. 344.

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23. CAE (Critical Art Ensemble), *Molecular Invasion*, New York: Automedia, 2002, p. 75.
24. Y. Hoshi et al., *Recognition of Human Emotion from Cerebral Blood Flow Changes in the Frontal Region: A Study with Event-Related Near-Infrared Spectroscopy*, "The American Society of Neuroimaging", vol. 21, issue 2, 2009.
25. G.K. York, *Localization in Visual Brain*, [in:] *The Neurobiology of Painting: International Review of Neurobiology*, ed. F. Clifford, San Diego: Elsevier Inc., 2006, p. 61.
26. G. Deleuze, F. Guattari, *Appendice: bilan-programme pour machines désirantes*, [in:] *iiidem, L'Anti-Édipe*, Paris: Minuit, [1973] 2002, p. 464; G. Deleuze, F. Guattari, *Balance-Sheet for "Desiring-Machines"*, trans. R. Hurley, [in:] F. Guattari, *Chaosophy*, ed. S. Lotringer, New York: Semiotext(e), 1995, p. 91.

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