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Body, Brain, and Beauty: The Place of Aesthetics in the World of the Mind

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'Mr. Einstein, which is the most important, art or science',
Einstein said 'No doubt about it in my mind, it's art.
Art must always come first, art and feeling.'[1]

1. Introduction

If 'art and feeling' is as important, or rather more important, than science, as Einstein is reported to have said, then it surely cannot be treated merely as something nice but not necessary; a more adequate account then can be provided by treating the aesthetic as being 'among the most complex responses of the human mind' (Lipscomb 1982: 4), and also as 'one of the most noble and profound of human endeavours' (Zeki 1999: 2). To claim that implies that the aesthetic comprises more than is commonly affiliated with it, and that further means that it is not reducible to merely emotional responses and pleasure devoid of reason. This view actually suggests that the aesthetic is to be viewed as a trait of the human mind, and as such should also be studied within the general scope of human knowledge.

Yet the contribution of aesthetics to envisaging the object of its investigation within a broader context of human mental and cognitive capacities has been lean, and the recognition that beauty is more than a source of pleasure, sense of harmony, or bodily feelings has been slow. Too little theoretical effort has been investigated in order to support the view that the aesthetic is a relevant dimension of the human being-in-the-world, e.g., that it is a powerful means of the structuring of our experience of the world. Granting it the role that exceeds the classical confines presupposes that the 'study of the beautiful' be opened toward a multidisciplinary account of human mind, action, and cognition.

Attempts have been made to place aesthetics generally in the context of cognition (see, for instance, Radman 2001, 2004), and more explicitly in the realm of scientific knowledge (Radman 2004/2005), in order not only to show that the aesthetic is a mode of knowing the world but also of raising awareness in the cognitivist camp that attempts to explain the nature of human cognition

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and action; not taking into account the aesthetic is deficient and doomed to incompleteness. Unfortunately, as it seems, these and similar attempts have not made much impact, and aesthetics has remained largely insensitive to acknowledging its own importance within endeavors to disclose the nature of human mentality. And yet things have been changing recently, and attempts to perceive artistic creativity in the cognitivist light are to be welcomed.[2]

In this paper I will argue (though on a very general level) that the aesthetic is a dimension of the human mind, and that any philosophical effort to understand the mental cannot be exhaustive without taking into account the 'nobleness' of aesthetic 'reason.' A strategy of the opening of aesthetics toward philosophy of mind, phenomenology, and cognitive science necessarily leads toward an encounter with at least some major models of mind with which these disciplines operate. In what follows I am going to provide, on the one hand, a brief idea of computationalism, and point to its limitations, and, on the other hand, to outline in a sketchy form an idea of embodied mind and situated cognition that creates a medium within which aesthetics can find its natural place. In that context I will try to find reasons why aesthetics has remained largely ignorant of theoretical and empirical sources that provide us with relevant new knowledge of the underlying biological processes and of computational options for understanding the human mind and cognition. Drawing on the selected literature, in the final part I will try to make a convincing point that both artists and aestheticians possess profound knowledge of human mentality that is relevant for gaining adequate understanding of the mind. In that sense I advocate the idea that the philosophy, and particularly the phenomenology, of embodiment need aesthetics as a partner in the common enterprise of deciphering the riddles of the human mind. That concept, in turn, allows 'beauty' to be, or become, a specific and irreducible element of the mental world of ours.

2. 'Computer metaphor' and other reductionisms

In the philosophy of mind and related fields past decades have been marked by various versions of cognitivism and ('strong' and 'weak'[3]) AI-theories of mind. The impact of computer technology has been so vast that not even an understanding of the most subtle aspects of human nature, namely that of our mentality, could do without it. The tendency has found its expression in the 'computer metaphor' that basically says that mind is *nothing but* the working of a computing machine. To conceive of the mental in terms of the mechanical is to accept that the brain is basically *no more than* hardware, and that mind is *nothing but* software. This metaphor has proven to be so powerful that it has become the prevailing model of mind for decades.

Another form of 'nothingbutism,' as Sunny Auyang (2000) names it, refers to reduction of the mental all the way down to the molecular level of the underlying neural processes. For instance, Francis Crick, the famous biologist and Nobel laureate, says 'that "You", your joys and your sorrows, your memories and your ambitions, your sense of personal identity and free will, are in fact *no more than* the behaviour of a vast assembly of nerve cells and their associated molecules' (1994: 3; emphases added).

The 'nothing but' or 'no more than' has become a popular form of reductionism of various sorts. In its other versions mind is equated with behavior, dispositions, information processing, functional organization, etc. What reductionism implies is that when we manage to gain sufficient scientific knowledge of the basis to which the phenomenon is reduced, then we will also have a full explanation of the phenomenon we are investigating. This kind of optimism is shared by neuroscientists and some philosophers who believe that the moment we have sufficient empirical knowledge of the structure and function of the neural system we are also immediately in the position to decipher the nature of the mind. In other words, nothing else is needed to explain the riddle.

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Encouraged by the development of empiricist methods, a new merging of 'hard' science and 'soft' issues of humanities has taken shape in couplings such as: biology of seeing, chemistry of emotions, neurophysiology of thought and cognition, neurophilosophy,[4] neurophenomenology,[5] and even – neuroaesthetics.[6] Novel (and until recently unimaginable) syntagms represent new relations that reflect the interest of the natural sciences in the nature of the human mind. A new consortium of disciplines has been established under the label 'cognitive science' in order to jointly probe the 'mysteries' of the mind and provide naturalized descriptions and explanations of the subtle, and elusive, processes that make us the sort of beings that we are.

The computer metaphor has become a ubiquitous model of mind, and no less influential has proven to be the identity of mind and 'wetware,' but the limitations of the 'nothingbutism' (specifically in the domain of AI), have already been recognized for some time now. An early and significant critique of the cognitivist models of mind has been provided by Hubert Dreyfus (1993; Dreyfus and Dreyfus 1986). His insights were profound and then only decades later also for those working in cognitive science and robotics did it become clear that it is relatively easy to represent and simulate intellectual functions but extremely difficult, or rather impossible, to simulate most simple bodily movements. It is not intelligence that is problematic for AI, but the ordinary or common sense knowledge that resists formalization. Even from this point of view, cognition and action can not be properly studied without respecting the fact that embodiment and 'situatedness'[7] is essential for understanding the nature of human agency.

We nowadays witness that even robotics shows sensitivity for *embodied* subjects (Steels and Brooks 1995; Pfeifer and Bongard 2006; Iida et al. 2004), and when computationalists talk about 'information processing,' they are not referring only to calculation; instead, they become more and more involved in investigating the *unconscious*. All that speaks in favor of models not in accord with classical cognitivist conceptions. Just as biology has its (natural) evolution, so does artificial intelligence evolve within its brief history. What justifies the use of 'evolution' in this context is the maturation of the idea that the *encapsulated mind* – the one that is disembodied and decoupled from the natural setting and social world – is indeed a poor explanatory candidate for the mind as is typical of humans.

Further, the shift toward embodiment, or the 'corporeal turn' (see Sheets-Johnstone 2009), has philosophically sobered us to accept that *intellectualism* can cover only a tiny fraction of what constitutes human mind. We nowadays know that by far most of the mental sphere is unconscious, that is, that the nature of human acting does not root in thinking and contemplation (see Radman 2011). Consciousness and explicit thought are late products in the course of mental processing and what is 'represented' in the mind in such a form is a selected bit from the broad field of the implicit.[8]

Having to realize that most of our mental activity is nonconscious, and that our acting is generally not ruled by intellect, and even less that it is volitionally controlled, brings us to the conclusion that a more adequate model of mind should resist the hegemony of intellectualism, dominance of deliberation, and conscious-centeredness. Such a conception should also be open toward all the capacities the human mind possesses but cannot be explicated or formalized.

At this point it should have become clear that the intended thought behind the advocating of such an 'opening' is that any attempt to provide a multidimensional account of the mind has to be sensitive also to aesthetic considerations. There are many reasons why this should be the case; and in order to better understand this need to integrate aesthetics into the joint venture of scientific explorations of mind, let me first outline aspects of embodiment that contribute to establishing mind not as encapsulated 'within,' but as exposed to the natural, social, historical, and cultural world.

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3. The importance of being embodied

As a reaction to the prevalence of the cognitivist paradigm in more recent times, a detour from the belief that cognition is reducible to computational-representational systems, interpreting input and generating output (behavior) on the basis of internal information processing, has become evident. The assumption that cognition can be studied by looking exclusively at what goes on in the brain has undergone considerable criticism, as have AI-models of mind that have proven limiting in many respects. A more integrating approach has been designed that takes into account 'embodiment' and 'embeddedness,'[9] affirms 'enactment,'[10] and also envisages mind as 'extended.'[11]

The major idea of *embodiment*, as it migrated from phenomenology to cognitive science, is that the mind is not merely in the body 'like the pilot in the boat'; the body is not simply the 'it' – the matter that does not matter for the more complex mental processes, but a medium that 'shapes the mind' (Gallagher 2009). Developmental psychologist Esther Thelen clarifies the nature of embodied cognition in the following way: 'To say that cognition is embodied means that it arises from bodily interactions with the world. From this point of view, cognition depends on the kinds of experiences that come from having a body with particular perceptual and motor capacities that are inseparably linked and that together form the matrix within which memory, emotion, language, and all other aspects of life are meshed. The contemporary notion of embodied cognition stands in contrast to the prevailing cognitivist stance which sees the mind as a device to manipulate symbols and is thus concerned with the formal rules and processes by which the symbols appropriately represent the world' (Thelen et al. 2001: 20).

Much of what can be called the 'embodiment turn' is inspired by the insights of thinkers such as Piaget, Vygotsky, and Dewey, but most notably by those in the phenomenological tradition, above all Maurice Merleau-Ponty and Martin Heidegger. They have contributed significantly to making us aware that all experience, and all thought, are structured by bodily constraints, whereby the body is not viewed primarily as mechanical, but possesses its own know-how capable of going beyond blind feels, and with a possible impact on the so-called higher cognitive functions.

When one talks about *embeddedness*, one refers to the idea that the body is interactively immerged in the surrounding[12] which supplies affordances (Gibson 1986) as a precondition for the subject's meaningful coping with the world. However, the term I prefer to use is 'enworldment' (the idea is outlined in Radman 2007) for it expresses what is most authentic in *animal symbolicum*.[13] That is, while 'embeddedness' suggests a sort of close relation to the immediately (physically) given, 'enworldment' puts in the forefront a broader horizon of the total experience of the world, including its symbolic or cultural dimension. Even the notion of the 'extended mind,' philosophically useful as it certainly is, stops short of including what is unique in human agents, namely, their existence within the 'worldly' network of social, historical, and cultural relationships. Indeed, the concept of mind has to be 'extended' but so that it embraces the cultural world.

'Enworldment' understood in such a way (that is, as the symbolic capacity of humans to conceive of things not immediately present to the senses but to generate, by means of imagination, the power to deal with what is merely possible) offers a natural possibility for aesthetics to complement the structure of the mind in a non-trivial way. In fact, what can be learned from the long history and rich theoretical treasury of aesthetic considerations is that beauty is not a mere fancy of a decadent mind but a profound capacity of all cognitive organisms to deal with the world in a way that is not propositional or logical. The relationship is typically not that of contemplation but of active participation away from explicit thought, consciousness, and deliberation; it is strongly marked by the 'laws' of aesthetic relevance that guide most of our acts in an implicit way.

An exception in the widespread ignorance of aestheticians in regard to embodiment is Richard Shusterman whose concept of somaesthetics (2008, 1999) is an original attempt (not quite novel in philosophy but very much neglected) to enrich the phenomenology of the body by promoting the corporeal 'potential for beauty' (1999: 299).[14]

We then realize that the embodied and situated mind is not a 'logical operator' and cannot be represented in terms of information-processing or neural dynamics; such a mind emerges as environmental and emotional, social and symbolic, intentional and historic, active and participating, flexible and capable of fictional leaps, adaptive and anticipatory, and also capable of generating beauty.

Discussing the place of aesthetics in the study of mind and speculating about the reasons for its isolationism, one might find understanding for aesthetics being reserved or unable to relate to the orthodox views from the early phases of cognitivism, but it is much more difficult to understand why aesthetics has remained largely disinterested in the philosophy and phenomenology of embodiment. Just as it is somehow clear that at the time of the hegemony of the 'computer metaphor' it was difficult for aesthetics to relate its subtleties to crude machine reductionism, it is much less easy to find a plausible explanation why the contribution from rich and manifold aesthetic investigations to the study of embodied mind, and specifically embodied and situated cognition, is so minimal or virtually negligible. It is more paradoxical as we realize that artists themselves, in a way, act as researchers into the mechanisms of human mental coping with the world.

4. Artists as neuroscientists?

The 'story of art' (to put it in Ernst H. Gombrich's terms) is the story of human creative endeavor to produce works of artistic excellence. Yet, dealing with those 'pieces' is only meaningful as it leads to an understanding of human mental power that brings them about. In that sense great artists are not only masters of a particular creative skill by means of which they convey a specific (artistic) knowledge of the world, but are also knowers of the human mind and its creative capacities. It is then justifiable, in the latter sense, to conceive of artists as scientists of the mind (an early example of such an attitude can be found in John Constable's definition of painting as a science[15]). Semir Zeki, a neurobiologist from University College London, in his recent publications goes even further and claims: 'artists are in some sense neurologists' (1999: 10), and he then speaks of Shakespeare and Wagner as 'among the greatest of neurologists' (1999: 2). They – as he says – 'at least, did know how to probe the mind of man with the techniques of language and music and understood perhaps better than most what it is that moves the mind of man' (ibid.)

In his view, 'most painters are also neurologists, though in a different sense: they are those who have experimented upon and, without ever realizing it, understood something about the organization of the visual brain […]' (1999: 2–3). He continues documenting his thesis by saying: 'Artists and neurologists have both studied the perceptual commonality that underlies visual aesthetics. For example, years before the discovery of orientation-selective cells (which respond selectively to straight lines and are widely thought to be the neural "building blocks" of form perception), Mondrian, in search of "the constant truths concerning forms," settled on the straight line as the major feature of his compositions [...] Similarly, long before the visual motion center of the brain (area V5) was charted, kinetic artists such as Alexander Calder and Jean Tinguely composed works that, in different ways, emphasized motion and de-emphasized color and form. Their compositions were thus admirably suited for stimulating the cells in V5 and anticipated artistically the physiological properties of motion-selective cells. This is why I believe that artists are, in a sense, neurologists who unknowingly study the brain with techniques unique to them' (2001: 51). He further

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quotes Picasso, who ('in an almost neurobiological statement') suggested: 'It would be very interesting to preserve photographically […] the metamorphosis of a picture. Possibly one might then discover the path followed by the brain in materializing the dream.'[16]

Zeki obviously has no doubts that the 'materialization of the dream' can be studied and explained by methods of neuroscience, and he even shows experimentally how this happens. For instance, he uses the technique of functional MRI to show that the brain reacts differently when processing beautiful and ugly stimuli (Kawabata and Zeki 2003). The conclusion that he draws is then consistent and straightforward: 'I am convinced that there can be no satisfactory theory of aesthetics that is not neurobiologically based.' (2001: 52)

But can there be satisfactory knowledge of mind and its underlying neurobiological processes without the sort of competence that aesthetics possesses? The response depends on the degree of engagement that aesthetics is prone to undertake in sharing scientific concerns about the paradoxes of mind and riddles of brain. Having an opportunity to participate in this sort of process may contribute to affirmation of the view that brain/mind is something alive, active and embodied, open to the world, socially conditioned, emotionally colored, shaped by culture, influenced by history, etc. It would then not merely be conceived of as an 'input-output' device, a functionalist machine, a logical-operator, or the 'central neural system' encapsulated within the head for which the rest of the body and what happens apart from it is pretty much irrelevant. It would prove to be emotional as well as rational, intuitive as much as logical, aesthetic no less than scientific, beautiful as well as propositional.

In accepting such a role aesthetics would transform from the role of an outsider in matters of the mind to that of a partner in the multidisciplinary exchange on one of the most important contemporary philosophical issues. Once such a reconstruction is initiated, it appears quite natural to seek beauty not only in landscape and *nature morte*, but also in the brain.

5. Towards a concept of the aesthetic mind

One could paraphrase Blaise Pascal's famous dictum '*Le cœur a ses raisons, que la raison ne connaît point*' [The heart has its reasons which reason knows not], in that the new version may sound: 'The mind has its reasons of which reason knows not.' The not reasonable or not rational part of the mind is a huge domain of the mental that does not simply refer to what is 'animal' in the *animal rationale*, but is rather a way of conceiving of the world (and ourselves) in a manner not translatable into propositional terms. It would thus be wrong to conceive of such a non-rational 'reason' as simply being blind and uneducated, reduced to instincts and unrelated to cognition. True, in the traditional dualist scheme, reason and emotion, logic and intuition, facts and imagination are viewed as mutually exclusive rivals, but that bipolarity has proven to have caused more harm than good. Such a bipolarity has placed aesthetic attitudes opposite to reasoned behavior; that counterposing, however, is a highly dubious stance. I believe there are enough reasons to claim that the domain, role, and import of aesthetics surpass the dualistic divide. In other words, I claim that the power of the aesthetic exercises its impact far beyond its 'proper domain' (emotion-intuition-imagination) and can be an important and productive element even in matters of science. Accordingly, beauty is not to be isolated exclusively within the 'soft' domain of human creativity, alien from the so-called higher cognitive functions and 'hard' facts of science.

On the other hand, biological investigations display a bounty of evidence that beauty is something more fundamental in the behavior of living beings than habitually recognized by classical views (see for instance Welsch 2004). Charles Darwin (1981, 1998a, 1998b) already recognized the relevance of sensitivity to beauty in non-human and human animals. Indeed, biology has a lot

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to say about beauty (see, for instance, Dutton 2010), and it makes us aware that we are dealing with a subject that has its far reaching evolutionary roots. Even though it was already Gombrich (1994) who talked about 'an evolutionist view of the mind,' it took decades to timidly pursue theoretical investigation in that direction.

Once we have discovered that, on the one hand, beauty resides in the most elementary relationships of living beings to their natural and social surroundings, and, on the other hand, that it leaves its stamp on what counts as the highest advance of human reason (what justifies the use of the phrase the 'aesthetics of science'), the road is open for a reconceptualization according to which the aesthetic appears as a constitutive dimension of the human mind in general.

Unfortunately, aesthetics has proven to be an introverted discipline, and, as Curtis L. Carter indicates: 'The role of aesthetics is increasingly diminished in the academic world […].' As he further observes, the problem is 'that aestheticians tend to write to each other, in small intellectual circles without regard for wider societal interests. The circles become even smaller when subspecialties develop with even smaller circles of academic interest.'[17] What follows from the above is a closure of the discipline which then deprives itself of the possibility to participate in contemporary discussions on some of the crucial traits of the human nature. Condemned to a self-talk, how can it ever make sound a statement that the beautiful is an elementary trait of the *mind*? In order to communicate such a message it has to be better integrated in the scientific community and feel engaged in wider societal concerns.[18] It is a pity that aesthetics itself cares so little about what is going on in the broader field of the study of mind and consciousness, and therefore misses the opportunity to be part of the multidisciplinary enterprise motivated to decipher 'the last scientific mystery of our time' (as is usually referred to the mind). In such a way, instead of explaining aesthetic phenomena in terms of neuroscience (as 'neuroaesthetics' does), one might try to explain the nature and mode of functioning of the 'wetware' in terms of aesthetic experience. There are no reasons to believe that the '*aesthetics* of mind' should be inferior to, say, *philosophy* of mind, *psychology* of mind, *neurobiology* of mind, *computational theory* of mind, etc. Such a theory would recognize the mind's capacity to deal with the human world in, for instance, a non-propositional, holistic way, based on the instant and implicit recognition of the beautiful, and to make judgments based on aesthetic criteria. In such a way it would affirm the *homo aestheticus* not as a separate creature, but as a ubiquitous companion of cognitive subjects acting in the world.

6. Consequences and further considerations

If the mind that belongs to an active and participatory being is 'enworlded,' as I claim is the case, and if the brain is profoundly shaped by culture (we may even speak of 'enculturement'), then neither mind's opening to the world nor modes of functioning of the brain can be adequately explained without taking into account aesthetic 'reflexes,' considerations, judgments, and theories.

The lesson from reductionism drives us to the conclusion that what is missing in the modern philosophy of mind and brain research is a *big picture of the mind*, and also a more *integrated conception of the brain*. The 'big picture,' however, is not complete without taking into account one of 'the most complex reflexes of the human mind'; the aesthetic is thus to be taken as an integral dimension of the human mind, and the importance of beauty should be studied within the study of mind and consciousness as one studies perception, memory, and behavior. Also, realizing that the brain is as much a product of culture as it is the outcome of biology (see Singer 2003, 2006), that is, that its evolution is not dictated by Darwinian principles alone, but is also shaped by *cultural* development, unavoidably leads to recognition of the importance of aesthetic qualities.

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Qualitative experience, so intensively discussed in the contemporary philosophy of consciousness, has nowhere been studied and analyzed as thoroughly and meticulously as in aesthetics. That sort of experience is to be taken as an indispensable theoretic companion in the study of *subjectivity* which has recently received additional input through the 'hard problem' of consciousness (Chalmers 1996), emphasizing the irreducibility of the subjective. Consequently, the uniqueness of beauty deserves to be brought to the attention of a wider scientific community, which, when it thinks itself most objective and impersonal, acts under the guidance of motives and criteria that can best be described as – aesthetic.

Epilogue: 'Go for beauty!'

Students of the master classes given by the famous piano teacher Leon Fleischer from Baltimore report that their teacher's utmost demand for the perfection of performance could be put in simple terms: 'Go for Beauty!' A way to interpret the credo is not to conceive of it as an appeal for interpreters to arouse what is most pleasing, pleasurable, or attractive in a piece of music, or generally in a work of art, but as a call for the search for the integrative idea, or rather 'feeling,' of a work of art that goes beyond the formal, technical, sensory, etc. – something that is profound and authentic, and yet cannot be fully transcribed in propositional terms, maybe cannot even be verbalized adequately, and for sure not capable of being fully represented in the objective language of the 'third person perspective' or simulation by machine. I believe the appeal is a call for taking a step beyond the merely sensory, formal, or technical (and maybe even beyond knowledge in its explicit sense), and a motive for achieving something fundamental that resists habitual forms of representation.

In short: beauty, far from being simply identified with appeal, pleasure, or blind emotions, provides a specific mode of comprehension of the world which is yet not fully translatable into formal language. An appeal for its realization (as in the 'go for beauty!') is a motive to look for a synthetic or holistic experience for which no algorithm can be found, and yet is felt as an authentic and irreducible quality of the subjective. Due to it art is irresistible, science is exciting, and ordinary life meaningful.

Aesthetic processes are powerful examples that what is going on in the human mind is not reducible to information processes. It is a sort of knowledge of the world, a means of orienting ourselves in the network of natural, social, and cultural relationships – a compass not based on contemplation or calculation – and is more like a strong background capacity that is at stake before the thinking 'self' knows of it.

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Notes

1. *The New Yorker*, March 22, 2004, p. 36.
2. Compare Boyd's saying: 'We can define art as *cognitive* play with pattern.' (2010: 15; emphasis added). See also Carter (2003).
3. For a brief overview see, for instance, Searle (1997).
4. See Churchland (1989, 2007).
5. Initiated basically by Francisco Varela (see Varela et al. 1991).

6. The field is primarily associated with Semir Zeki, a prominent neuroscientist who is also the director of the Institute of Neuroaesthetics at University College London.
7. Situated cognition has become a regular field of investigation in computationalism and robotics.
8. There is nowadays enough empirical evidence that supports the claim that most of mental processing is unconscious. Neuroscientists teach us that only a small portion of mental events is realized in consciousness (see, for instance, Gazzaniga 1998).
9. The phrase 'embodied, embedded' was, as far as I know, first used by John Haugland (1998).
10. See for instance, Evan Thompson (2007), Alva Noë (2004), Susan Hurley (2002), and Daniel D. Hutto as reviewed in Menary 2006.
11. A concept elaborated by Andy Clark and David Chalmers (1998).
12. 'Our body is not in space like things, it inhabits or haunts space. it applies itself to space like a hand to an instrument, and when we wish to move about, we do not move the body as we move an object. [...] For the body is much more than an instrument or a means, it is our expression in the world, the visible form of our intentions. Even our most secret affective movements, those most deeply tied to humoral infrastructure, help to shape our perception of things.' (Merleau-Ponty 1964: 5).
13. That is how Ernst Cassirer defines human beings in his elaborated philosophy of symbolic forms.
14. His theory has received numerous responses and I cannot deal with them in any detail within this paper.
15. 'Painting is a science and should be pursued as an inquiry into the laws of nature. Why, then, may not landscape painting be considered as a branch of natural philosophy, of which pictures are but the experiments?' (Quoted in Gombrich 1972: 33).
16. Quoted in Zeki (1999b: 2062, and 2001: 52).
17. As he goes on analyzing possible reasons for aesthetics' 'loss of power,' he points to the incident in the following way: 'Many aestheticians are skilled at formulating theoretical concepts, but fail to seriously examine their concepts with respect to the arts themselves.' (Carter 2004: 2). If Carter's criticism is correct, that is, if aestheticians are in a way ignorant of 'arts themselves,' then we should not wonder why they fail to be open and sensitive to phenomena and fields of investigation such as those of natural science.
18. The 2001 Makuhari conference has been a productive attempt not only to fuse aesthetic options beyond the West-East divide but also to fuel new energy into the discipline. Apart from that, and judging after the activity of International Association for Aesthetics in the last ten years or so, there is little evidence that aesthetics really ambitions anything above the tradition, and there is no sign of envisaging its role in the future significantly different from that of the past. Even when it talks of 'changes' it is a timid expression for fine-tuning rather than initiating a spirit of opening toward other academic disciplines and social practices that would eventually stimulate itself for true changes. What is basically at stake is the self-satisfaction with routine, celebration of the known, lack of courage for the novel, and also of motivation for a multidisciplinary exchange.

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