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Sensible schemes in aesthetic experience. Neuroaesthetics and transcendental philosophy compared

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Abstract. My paper sets out to compare neuroaesthetics and transcendental philosophy, concerning the perception of schemes of imitation in aesthetic experience. The argument is structured in four steps: first, I will introduce the function of schemes in mirror-neuron-based processes and in general in the embodiment theory of Mark Johnson and George Lakoff; second, I will consider some analogical relations between a transcendental approach and neuroaesthetics concerning semantics; third, starting with the statement that one open question in neuroaesthetics is how creativity emerges, I would like to propose a transcendental account about sensible schemes as a possible foundation of creativity. I will conclude my paper with some examples from visual arts and aesthetic practices in general.

Key words. Mirror neurons, aesthetic experience, schemes, imitation, transcendental philosophy.

This paper will investigate the semantic view of the application of research on mirror neurons to aesthetics developed by Vittorio Gallese and David Freedberg. I am not a neuroscientist or a neurophilosopher; I have a background in transcendental philosophy as a reflection on the conditions of possibility of our experience of meaning. I would first like to introduce some assumptions regarding embodied knowledge and neuroaesthetics; I will then unveil some analogies between neuroaesthetics and the transcendental approach; third, I will suggest an extension of aesthetic creativity by introducing the notion of scheme from a transcendental point of view. A transcendental account of meaning – as I claim here – could provide a deeper foundation for creativity that is different in method but compatible, in terms of semantic theory, with neuroaesthetics.

1. MIRROR NEURONS, EMBODIMENT, AND IMAGE-SCHEMES

This first section aims to consider some fundamental assumptions found in neuroaesthetics and embodied knowledge. Let me start with a first assumption: «Mirror neurons are involved in processes of meaning» (Gallese, Lakoff [2005]). Conceptual content is the result not only of abstraction processes, but also of the sensory motor system: «conceptual knowledge is embodied, that is, it is mapped within our sensory-motor system» (Gallese, Lakoff [2005]: 2). We recognize meaning not only because we cognitively understand its conceptual content but also because we react to visual and acoustic perception and translate it into motor schemes that are acts of implicit imitation. I understand the gesture of a person because I know this experience «bodily», and my body imitates this act implicitly. This translation is a complex process of imagination using «a shared neural substrate» (Gallese, Lakoff [2005]: 2).

The research of Rizzolatti and his team has shown that the imitation process is a fundamental part of the recognition of actions and that it is possible through the mirror neurons that were originally discovered in a specific area of the premotor cortex in monkeys (Rizzolatti *et al.* 1996) and later in humans: «The mirror system matches the observed action with motor responses stored in the premotor cortex and allows a fast, efficient response to that action» (Rizzolatti [2005]: 71). Mirror neurons make the *process of simulation* at the level of neurological processes possible, which is deeply related to the capacity of imagination: «When the subject (a monkey) hears another individual performing an action with a distinctive sound, the subject is simulating the same action. Since action and simulation use some of the same neural substrate, that would explain why the same neurons are firing during observing, hearing, and executing the same action» (Gallese, Lakoff [2005]: 9). I will not analyze the mechanism of mirror neurons in detail; rather I would like to focus on the way Gallese applies the activity of mirror neurons to conceptual knowledge that can-

not be reduced to deductive-logic processes alone. It is important to stress that the neurological approach of Gallese is a prudent and non-reductionist account, because the function of mirror-neuron processes are applied not to the creation of the work of art but to the reception of them by the observer in order to reveal some invariant dimensions beyond the cultural, biological, and psychological variables (Pinotti, Somaini [2016]: 65).

Meaning does not depend on language alone, or on the linguistic definition of concepts. Semantic experience (as «experience of meaning») involves more aspects of our interaction with the world, other persons, and ourselves. Not only can this complex experience be described through linguistic and conceptual patterns, but it also involves bodily-sensory motor skills: they allow for complex interaction with the environment and are a constant translation between perception and meaning. Conceptual knowledge is thereby grounded on a multimodal process of imagination which is – as Kant states – a very wide faculty of performing knowledge that is a grasping of meaning, as Gallese and Lakoff point out: «According to our proposal, the concept *grasp*, from which we will start, gets its meaning via our ability to imagine, perform, and perceive *grasping*» (Gallese, Lakoff [2005]: 2).

The experience of meaning, like concepts, is not a completely regulated process. Conceptual meaning is conventional and flexible at once (Gallese, Lakoff [2005]: 1). The experience of meaning cannot be defined or learned; it has to be used and practiced. In this sense grasping meaning is a *playful dimension* of creating an experience of it. The idea that conceptual meaning depends not only on linguistic definition but on its use is well known in the philosophy of Ludwig Wittgenstein; in my opinion it is also the most relevant premise of Kantian schematism in the *Critique of Pure Reason* and of the play of faculties he develops in the *Critique of Judgment* – I will come back to this point in the second section.

In the embodiment theory of George Lakoff and Mark Johnson, the power of imagination is rooted in Kant. In particular, Johnson explains the

importance of the Kantian account in his book *The Body in the Mind* (1987). He recognizes the central function imagination has in knowledge processes and suggests an extension of it, overcoming the Kantian distinction between determinant and reflective judgment (Kant, *Critique of Judgment*, §59). In this sense – he assumes – «there can be no meaningful experience without imagination» (Johnson [1987]: 151) and «all meaningful experience and all understanding involves the activity of imagination which orders our representations (the reproductive function) and constitutes the temporal unity of our consciousness (the productive function)» (Johnson [1987]: 157).

Johnson and Lakoff defend an *experientialistic account*, trying to overcome the fundamental dichotomies between subjectivism and objectivism on the one side and between externalism and internalism on the other. According to Johnson, cognitive semantics cannot be separated from imagination as a process of constituting meaning structured by schemes – which Kant understood as «nonpropositional structures of imagination» (Johnson [1987]: 19). The sensory-motor system is structured through patterns that are not conceptual or simply representational, but strongly *embodied*. Mark Johnson and George Lakoff describe this motor system as related to and based upon image-schemas. Johnson distances himself from Neisser's and Rumelhart's notions of scheme, and wants to defend and extend the Kantian account due to its non-propositional and imaginative character. He develops the notion of image-schemas, which «function primarily as abstract structures of images. They are gestalt structures, consisting of parts standing in relations and organized into unified wholes, by means of which our experience manifests discernible order» (Johnson [1987]: XIX).

Schemes are not particular images. On the contrary they are abstract structures that are not static but highly dynamic and performative. They are relatively stable and semantically flexible; they allow for transformation and are transitive. Their meaning depends on the context and other variables. Their conventional meaning is called «literal»: it is fixed but provisional. Overcoming

the Kantian distinction between productive and reproductive imagination, Johnson extends the function of metaphorical processes and points out their creative power by knowledge: «Creativity is possible, in part, because imagination gives us image-schematic structures and metaphoric and metonymic patterns by which we can extend and elaborate those schemata» (Johnson [1987] 169). This extension of the imagination was also the main aim of the *Metacritique* of Herder (1799) and in particular of the transcendental philosophy of Salomon Maimon (1786), as I have recently shown (Gasperoni [2016]).

Gallese and Lakoff accept that the capacity to imagine is «seemingly infinite», and they do not reduce all imagination to image-schemes (Gallese, Lakoff [2005]: 9) that have an internal and external character at once: «Schemas are *interactional*, arising from (1) the nature of our bodies, (2) the nature of our brains, and (3) the nature of our social and physical *interactions* in the world. Schemas are therefore not purely internal, nor are they purely representations of external reality» (Gallese, Lakoff [2005]: 13). There is also a deep correlation between concepts and schemes, which I will consider in the next section.

This essential sensory-motor level of the experience is compatible with the discovery of mirror neurons, in terms of grasping meaning due to its non-propositional and non-cognitive value, which for Gallese is a fundamental mechanism of an aesthetic experience. Together with the art historian David Freedberg, Gallese argues against cognition as the primary element of our responses to art:

We propose that a crucial element of esthetic response consists of the activation of embodied mechanisms encompassing the simulation of actions, emotions and corporeal sensation, and that these mechanisms are universal. This basic level of reaction to images is essential to understanding the effectiveness both of everyday images and of works of art. Historical, cultural and other contextual factors do not preclude the importance of considering the neural processes that arise in the empathetic understanding of visual artworks. (Gallese, Freedberg [2007]: 197)

The perception of works of art for the most part depends on embodied simulation and on empathetic feeling, which constitute a primary level of response and cannot be reduced to discursive and linguistic explanations of content. Empathy, which – as Gallese recognizes – was in the 18th century an important element of aesthetics, has a similar systematic function to simulation processes in terms of grasping conceptual content: to open a new view of perception as embodied practice which also involves content. Semantics is thereby not only based on grasping content but focused on the modes of this grasping, which creates an experience of the content. Meaning in this sense depends on its use, which is a multimodal process of creating experience.

Gallese and Freedberg refer mainly to paintings, sculptures, and architectural works. I would like to focus on two examples, which I will reconsider at the end of this paper from a transcendental point of view. The first example concerns the work of Lucio Fontana, in particular his cut canvas, «where sight of the slashed painting invites a sense of empathetic movement that seems to coincide with the gesture felt to have produced the tear» (Freedberg, Gallese [2007]: 197). The second example is the work of Jackson Pollock, in relation to whose abstract paintings «viewers often experience a sense of bodily involvement with the movements that are implied by the physical traces in brushmarks or paint drippings – of the creative actions of the producer of the work» (*ibid.*).

This neuroaesthetic approach supports a new way of grasping aesthetic meaning that is not conceptual and discursive but has a direct connection to our perception. We perceive, simulate and imagine a gesture, and almost the power of this gesture, and through this we have an empathetic response to this work. This account shows the performative dimension of our aesthetic perception, and it can be compared with Horst Bredekamp's (2010) theory of the image-act and Maria Luisa Catoni's (2008, 2013) research into the function of schemes in the social function of mimetic arts in Greek antiquity. Catoni refers to the discovery of mirror neurons and relates this to Greek art, for

instance transmitting choreographic illustrations on pottery made knowledge-based empathetic responses possible through schematic processes (Catoni [2008]: 11-13).

2. THE TRANSCENDENTAL APPROACH AND NEUROAESTHETICS COMPARED

I would like to focus on some analogies between transcendental philosophy and the central assumptions of neuroaesthetics I explained above. The first analogy concerns the *method*. Neuroaesthetics, according to Gallese and Freedberg and the embodiment theory of Johnson and Lakoff, intends to extend the range of possibilities that ground our experience of meaning. These theories are not empirical descriptions of our cultural and empirical knowledge but try to define a *universal and subpersonal substrate* of it. Mirror-neuron research finds the subpersonal validity of this substrate on scientific method and experiments. Neuroaesthetics and embodiment research rather operate at a discursive level and make theoretical assumptions with scientific correspondence. Like transcendental philosophy, they seek to explain our capacity for reflexive thought. They make some general assumptions but are nevertheless able to define the boundaries and potentials of our knowledge. The transcendental question – namely: How is synthetic knowledge a priori possible? – operates on a similar level, and discussion of the Kantian explanation of this kind of judgment often runs the risk of forgetting the procedural character of the methodological possibilities of synthetic knowledge: subjectivity is emancipated from the given concept – given by empirical reality or by divine thought – and is the performative focus of knowledge on many levels. Transcendental philosophy tries to distinguish these levels *heuristically* in order to *discover* the possibilities we have by making an experience of meaning and by creating new ones.

The notion of *potentiality* is in my opinion the most important and real aspect of a transcendental approach to philosophy: it aims to show the

possibilities we have by creating experiences of meaning at different levels. These possibilities are not actual and empirical possibilities; they do not arise from the experience. Instead they are discursive products of a reflection about the fundamental processes of our experience. This reflection reveals and extends the boundaries of our experience, indicating a wider range of possibilities. Transcendental reflection is thereby not a static description of the given experience but an investigation of structured processes that allow our experience to be dynamic.

The second analogy concerns the definition of knowledge based on the assumption that *knowledge is embodied, synthetic, and productive*. Semantic experience is thought emancipated from the conceptual – this assumption, usually considered a fundamental assumption of continental philosophy since the time of Ancient philosophy, should question many points of *analytic* philosophy. This procedural definition of knowledge is the *raison d'être* of Kantian schematism in the *Critique of Pure Reason* (A 137–138, B 176–177). As Kant explains, the conceptual content cannot be defined and depends on its use. Without schemes, concepts would not have content; this depends on the synthesis with intuitions. Schemes are rules but not laws of this synthesis of concepts and intuitions. And rules are not independent from their use, as Wittgenstein clearly states in the *Philosophical Investigations* (§ 43). In particular, in the case of empirical concepts we need the ability to grasp meaning in terms of both a conceptual and intuitive meaning. There is not just one correspondence between concept and intuition; experience of meaning also depends on cultural tradition and communication, which fill out and constantly change the content that only needs a stable content-core and a sensible form in order to be in use.

In the *Critique of Pure Reason* Kant relates the schematism to a process of knowledge in which conceptual content is always present – at least as a very generic determination, which he defines in German as «something» (*Etwas*) (Kant AA IX: 95) to indicate a perception I have but cannot specify with content. Perception is almost always in the

empirical case a necessary condition for knowledge. Apart from the definition of the intuitions (Nuzzo [2008]: 5) and the geometrical construction in which the intuitions are the infrastructure of an embodied knowledge, Kant does not consider the power of an embodied knowledge in the first *Critique*, in which perception alone can be a schematic act. That is one of the reasons why Herder criticizes him in his *Metacritique*, proposing the introduction of a «metaschematism of sounding images of thought» (Herder FHA, 8: 420) that extends the power of the schematism and the imagination to perception as a morphogenetic process of knowledge. In the next paragraph I will consider the function of a «schematism without concepts» as Kant outlines in the *Critique of Judgment*, but in my view this can be extended to art as perceptive knowledge. This extension is possible if we consider transcendental philosophy as yet-to-be actual and improvable beyond the boundaries of Kant's interests, including phenomenological and artistic research. And to relate transcendental philosophy to neuroaesthetics is to show the actuality of the latter in addition to a mere historical and philological perspective on it.

In conclusion, the *performative dimension of semantic experience* is a shared issue between neuroaesthetics and transcendental philosophy. Knowledge and recognition of meaning imply that this is an open-ended process, and in a broader sense they require *creativity*. Every recognition is a constitution and a productive process. In this sense each *imitation act* is never a mere imitation, but rather always a *process of constitution* that is at the same time a mediating process between matter and form. The definition of the conditions that make this process of constitution possible can be defined as the aim of transcendental philosophy. Constituted knowledge is on the one side cultural and conventional, and on the other side possible in virtue of a shared sensibility – not merely a physiologic body – in which our thought and perception find an articulation. This shared dimension is a *space of possibilities*, a *porous space* in which we are determined by our culture and learn contents but at the same time are opened to

other cultures, epochs, and future changes. This shared dimension can be described transcendently, indicating some of the primary elements of knowledge, perception, and thought that are not static: they constitute a pliant infrastructure whose constructive potentiality has to be discovered by making use of it. Our senses – alone and in their synesthetic interconnections – are conditions of possibilities of our perception. They are first of all *spaces of possibilities*: they make our perception possible, but our perception can change by increasing our senses or for instance in the art works focused on it.

Images are in this sense sensible schemas not as particular images but as sensible pre-determined ranges of possibilities realized by our perception and experimentation. They are *forms of unity* and in the empirical use a *unified whole*. Therefore a transcendental approach does not exclude creativity; on the contrary each perception act, as a realization of a transcendental potentiality, is a creative act because it gives an actual form to a sensible form – this relation between potentiality and realization-act is one of the most interesting aspects of Roman Ingarden's definition of the schematic nature of literal works (Ingarden [1973]; Gasperoni [2011]: 7–29). A transcendental approach could in my opinion provide a philosophical understanding of some aspects that constitute our knowledge: the first concerns creativity, the second the definition of sensible schemes. In what follows, I will consider these two aspects.

3. SIMULATION AND CREATIVITY

Mirror-neuron activity shows that we understand the reality we already know, and in this sense we understand it thanks to *simulation* as a complex process of sensible translations and mimetic responses. The act of simulation is based on the fact that we know the act we perceive. This knowledge is not conceptual and is grounded on our sensory-bodily system, as Vittorio Gallese explains: «creativity cannot [...] be reduced to the mere product of a disembodied cognitive appara-

tus» (Gallese [2010]: 447). But how then is creativity possible? Are there general patterns, structures, or schemes that allow us to create new determinations and to grasp them in some way? According to research on mirror-neurons, if the determinations were really new and we had no competence, then we could not grasp them – this discrepancy is proved by the perception of different dances in specific cultural contexts: a person grasps at glance a classical ballet if he or she belongs to one culture and not the dance of capoeira, which belongs to another cultural tradition. Mirror neurons try to find a scientific, experiment-based way to describe the mechanisms of this grasping of new meanings. The rise of creativity as the determination of new (unknown) meaning is therefore a research proposal that philosophy has considered since its very origins.

Everyday life requires creativity and works of art even more so, because through them we achieve a new experience of meaning. Philosophy tries to answer this question since its origins concern the definition of what fiction actually is. The distinction between describing reality and creating a new reality is considered by Aristotle, who in his *Poetics* defends the power of poetry against the mere historical description of facts. Poetry is more philosophical than history: the former describes particular events, while the latter tries to find the universal in particular facts. This procedural and performative nature of poetry is a space of a wide range of possibilities that reflects and allows us to experience facts. Art is a very strong form of creativity, dealing not only with the recognition of known elements but also with the overcoming of them and the production of new determinations of knowledge – and in a broader sense of perception and thought.

We can distinguish (only as a heuristic strategy) two levels of creativity: on the one hand creativity as a (broader) productive power, recognizing usual meaning (for instance in our apparently uncomplicated everyday actions), and on the other creativity as a (narrow) productive power, overcoming usual meanings and creating new meaning. We could specify these two kinds of

creativity by referring to Kant. He distinguishes two different ways of making meaning sensible: the first is the *schematic exhibition*, which makes a concept sensible and has a correspondence in the intuitions of time and space. The second is the *symbolic exhibition*, in virtue of which a concept «which only reason can think and to which no sensible intuition can be adequate» (Kant, *KU*, §59) is made sensible indirectly and analogically. Schematic exhibition realizes concepts of intuition directly, symbolic exhibition indirectly – for instance through a metaphor using real concepts in order to express concepts that are not sensible. We also have a narrow field of sensible knowledge and then a broader field of symbolic meaning that is not graspable in a determination but is an essential part of our thought of abstract concepts and feelings.

Lakoff refers creativity to metaphors that have such imaginative and creative power and extend the conventional use of meaning: «New metaphors have the power to create a new reality. This can begin to happen when we start to comprehend our experience in terms of a metaphor, and it becomes a deeper reality when we begin to act in terms of it» (Lakoff, Johnson [2003]: 145). This creative power can change old conceptual uses and introduce new concepts. Metaphors are one of the most important processes that make cultural change possible and visible. But it seems impossible to indicate the invariances that structure this metaphorical process and explain how a new meaning becomes an accepted meaning and creates a cultural change.

Kant also refers to a third kind of exhibition, which is in my opinion underestimated, namely a so-called «schematism without concept» (Kant, *KU*, § 35). Whereas in a symbolic exhibition the concept expressed has no immediate correspondence in intuition, in this third kind of schematism we have a sensible expression that has no correspondence in a concept at all. We have a new intuition without a concept. We perceive a new presence without conceptual content. We could compare this kind of exhibition to a new gesture without meaning, with a dance without codification,

with an object without name – like the person who for the first time perceives the dance capoeira.

We also have two different kinds of new meanings: first a metaphor, which creates a new meaning in virtue of a new combination, or an analogy, between meanings we already know; second a new artifact that materializes a new reality we perceive for the first time. New artifacts concern every kind of artwork. And a linguistic metaphor can also become an artifact when a new meaning, expressed for instance through a discursive sentence, materializes itself into a new word, a *neologism*. This is also the case for a strongly perceptive work of art without a strong conceptual content, for instance a painting by Yves Klein or Ad Reinhardt. Precisely this kind of work, which cannot be reduced to conceptual meaning because its aesthetic value depends on the perceptive quality, is an appropriate example of a reflection on the function of embodied processes and mirror-neuron mechanisms by grasping aesthetic meaning.

When we observe a *purely perceptive work* we are confronted with a new event, and the philosophical question is to understand if this experience is possible, if there are rules or constants to describe this process yet, or if instead we have to accept that this experience does not concern new meaning at all – and meaning has to be generated from known meaning only. Maybe we have to assume that, in order to create an experience of this new perceptive meaning, there should always be a real element in art, for example that we need a specific culture of color in order to recognize a painting of Rothko. In this sense we grasp new meaning by becoming competent with this material substrate. In the case of a metaphor we could answer that we understand it as a combination of already known words that we can combine and refer to each other in order to explain non-sensible dimensions of thought. But aesthetic practices are not mere combinations. Rather, they are *expressions*, and they are so strong that they can seem more material than reality itself.

The revaluation of the perceptive substance of the aesthetic experience by creating a new kind of phenomenological objectiveness is the cardinal

point of Merleau-Ponty's reflection on the act of painting: «It is by lending his body to the world that the artist changes the world into paintings» (Merleau-Ponty [1993]: 123). The body becomes sensible in virtue of this aesthetic act of seeing and being visible at once: the aesthetic act realizes a potentiality given in the sensibility and at the same time it is a medium for perceiving what my sensibility can perceive. In these terms, art works that focus on perception – as for example the work of the artists group *Zero* – have an important aesthetic value in virtue of making us aware of the imaginative power of perception.

A transcendental account can help us to overcome this dilemma by providing a subpersonal system that makes the subjective experience at once variable and stable. If on the empirical level there is new meaning only in the form of a new content and of a new perceptive reality, there are at the transcendental level invariants that are sensible schemes supporting creativity.

4. SENSIBLE SCHEMES

Known meaning and new meaning follow certain sensible patterns, in my account – I call them schemes. Every experience of meaning has a sensible articulation: when we do not recognize the content we are confronted with, this is its sensible matter, which is sensibly structured in virtue of schemes that are related to sensible modalities. Sensible schemes are media of translating and elaborating meaning. They are compatible, in my opinion, with research on neuronal activity, but they are philosophical notions, products of philosophical reflection. They do not derive from empirical knowledge but are related to it. They are conditions of possibility of recognizing meaning. They have no conceptual content and are first of all sensible. They are *patterns of sensibility*. In order to explain what a scheme is, it is important to clarify what we mean by *sensible*. Schemes are founded in our sensibility, which does not correspond to a physiology of senses, but is a philosophical reflection on the way in which

content is structured sensibly. This idea is derived from Kant, who defends the function of sensibility and underlines its pure – not empirical – character. At the same time it is also an extension of the Kantian account, pointing out the morphogenetic function of sensibility – this revision of schematism can be related to Herder's consideration of sensible processes (1799) and to Plessner's definition of sensible qualities (1923), as I show in Gasperoni (2016), where I explain the schematism as an act of *Versinnlichung*. This is a German concept, derived from Kantian philosophy, which has no established translation in English and is too often ignored or understood as *embodiment*. *Versinnlichung*, on the contrary, has its roots in classical German philosophy and stands for philosophical reflection on the process of making sensible our experience of meaning. It can enrich our current debates within embodiment theory in order to introduce into the debate of embodied perception the space for philosophical reflection on its condition, and the sensible character of schemes has such a value.

Sensible schemes are different from the image-schemes described by Mark Johnson and George Lakoff. The fact that the mind has a bodily basis is a condition of the possibility of experience, and Johnson aims to explore *how* the body is in the mind (Johnson, 1987: XVI). The non-propositional structure of schemes has a fundamental anticipatory function in constituting meaning. In this sense Johnson's account seems to be compatible with the transcendental account of experience. Experience is the main source of a knowledge that is cultural and empirical. Lakoff and Johnson admit a basic realism, which means that meaning is presupposed. The conditions of possibility of meaning are related to image-schemes, as I explained above. Meaning is already materialized in embodied processes, but at the same time this experience is rooted in schemes, which are «structures for organizing our experience and comprehension» (Johnson, 1987: 29) but are not innate – at least until scientific proof for this is provided. It is then not clear if schemes themselves are empirical or innate. That is a crucial point; we will also

find in the comparison between embodied knowledge and transcendental philosophy a *hot spot* of the embodiment theory, which seems to identify concepts and schemes, contents and experience, products and processes.

Sensible schemes have, in my view, a *compositional function*: they structure the experience of meaning through sensibility and make it possible. They *canalize meaning*, and in virtue of this performance act they make meaning sensible. Sensible schemes are therefore subjective but not as personal physiological acts; they relate to the body and its physiological determination but only as an act of mediation. This point is shared with the account given by Desideri, who suggests a theory of *aesthetic schemes* that also distances itself from Lakoff and Johnson's account. The important function of aesthetic schemes is also compositional and, as Desideri notes, relates to «premodern» notions of aesthetic reflection like proportion and symmetry, which are not yet actual (Desideri 2016: 135). These kinds of schemes for him have an emotional tension and leave emotional marks.

Sensible schemes are in my view compatible with this emotional imprinting, but they act on a transcendental level. They do not have content but structure it in the form of moving and static images, diagrammatic figures and sound composition. Design processes and artworks are paradigmatic of this kind of dynamic experience. In architectural design, for instance, space is generated through sensible media. In this field a transcendental approach tries to reflect on media – like models, drawings, texts – not as mere tools of external and empirical representation but as the conditions of the possibility of the design process itself. Design is possible through media, and not the contrary. They are the spaces of possibilities in which we create empirical space. The development of new media generates a discovery of these possibilities in our sensory-body system. The action of the schemes goes from the acoustic dimension to spatial movement embracing all compositional forms of our experience. Sensible schemes do not correspond to the material content of this experience but only to its sensible form or medial essence.

Sensible schemes are transcendental. They are not concrete images or words but conditions of their possibility. By explaining the relationship between vision and space we are dealing with an *abstract image* as a space of possibilities. Images in this sense are concrete realizations of a wide range of visual and haptic possibilities. Even if images can be more constructed than we think – as the many cases of digital images show, the correspondence between a meaning and an action functions almost visually, and a metaphor is more a case of synesthetic translation than a creation of new meaning – I hear something and I relate the sound to an action: for example I hear the strides of a person and I conclude that this person is entering my room. I simulate an action that I already know. I can also simulate a new action, for example, searching for a new act or constructing a new image that simulates a new meaning with a metaphorical nature. But non-visualized – into an image or bodily act – meaning, such as a philosophical theory, a novel or piece of music are also interesting.

It is very difficult to describe the singular modalities of sensibility, but there are some border cases which show us that there is, for example, a visual space in images that is purely visual and not haptic – for example a painting by Rothko or a photograph: their colors are inaccessible to blind people, while for instance a relief makes a translation from visual into haptic perception possible, so that a blind person could also perceive a figurative object or the very haptic quality of a painting, which thus becomes something more than a painting (Krois, 2011: 160). This heuristic method can also be applied to language and abstract thought, considering for instance words that also have an abstract dimension and not a direct, empirical correspondence – such as words for feelings or qualities. But a systematic consideration of every sensible pattern would go beyond the reach of my paper. Instead I would like to explain this point by referring to some examples of artworks to which neuroaesthetics refers, as I introduced at the end of the first section.

In perceiving Michelangelo's sculpture *Atlas Slave* we feel a sort of struggle and have empa-

thetic feelings with the slave, who escapes from a block of stone. This struggle is also visible as mirror-neuron-activity, showing that the visual information is translated into bodily information. Thanks to this translation we perceive a very similar struggle of escaping from the block of stone. From a transcendental point of view, our perception is a constant translation between two different kinds of scheme: in perception we move between the visual scheme and the sculptural scheme. We are on the border of vision and movement; by perceiving the struggle we move into the dimension of a material world – and the medium makes this perception stronger.

In Lucio Fontana's *Tears* the perception of the painting coming out of its frame also exploits a medial transition or switchover: the power of the gesture is the act of making the painting into a sculpture. The painting gets a material plasticity from this gesture that – as Gallese and Freedberg note «invites a sense of empathetic movement that seems to coincide with the gesture felt to have produced the tear» (Freedberg, Gallese, 2007: 197). Another medial transition takes place in Jackson Pollock's act of painting, which is characterized by a strong bodily involvement. All these artworks realize a space of possibilities given in sensible schemes, so that their realizations are very different but they at once address a similar sensible dimension and in particular the same frontier. This medial switch is not essential to artworks as the example of Rothko's painting shows, but also in this pure variant in which an image seems to correspond to a pictorial representation, the work is confronted and opened to other sensible modalities. This medial switch concerns not only modern art or the frontier between image and sculpture but every kind of sensible metaphor, in a similar way to the activity of mirror neurons in making a translation between different modalities of perception. It can for instance also concern the medial frontier between linguistic articulation and visualization, so that the diversity of languages can also be analyzed in terms of this switch. It also concerns the frontier between written and executed music, between poetry and image, between pho-

tography and film to mention a few cases. All fictional and constructed elements of our making something sensible are medial moments, and that is a transcendental assumption.

In the end, then, even if sensible schemes are the result of philosophical reflection and cannot be verified, in a narrow sense, by mirror-neuronal activity, I would like to affirm that there is some compatibility between the general assumption that mirror neurons are involved in processes of meaning and the transcendental account of the sensible determination of meaning. Sensible schemes include the *multimodality of perception* and are describable as a range of sensible modalities which can be described from a heuristic point of view as border-cases. They are *subpersonal*, *prereflexive*, *prelinguistic*, and *non-representational*. The transcendental foundation of schemes is not only compatible with the mirror-neuronal account of meaning, but also represents an extension or radicalization of it. It inverts the relationship between recognizing and sharing meaning: we recognize meaning because we share sensible schemes. Empathy also has a transcendental meaning that is content-independent because it is founded on sensibility and not on empirical content. Empathy should be distinguished from simulation. Creativity is a mimetic process as a narrow form of imitation but it is at least a process of overcoming mimetic practices and of discovering new meaning. Sensible schemes are, in conclusion, the common ground of experiencing meaning and the initiation of a new *transcendental anthropology*, describing the relations between human beings and the media in virtue of which their experience is possible.

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