

# Epistemology and Ontology of the Quality: An Introduction to the Enactive Approach to Qualitative Ontology

*Andrea Pace Giannotta*<sup>†</sup>  
andreapacegiannotta@gmail.com

## ABSTRACT

The notion of *quality* constitutes the title of a pressing philosophical problem. The issue of the location of the qualities of experience and reality leads to thematize the “clash” between the scientific and the manifest image, which also lays at the heart of the issues of naturalism and reductionism in the philosophy of mind. I argue that a transcendental version of the enactive approach constitutes a fruitful way to address these issues, thanks to its conception of the relation between subject and object as dependent co-origination. In this way, the enactive view constitutes an alternative to both the *internalism* and the *externalism about qualities* (which lead, respectively, to *scientific* and to *naïve naturalism*), constituting a processual and relationist framework that can be fruitfully applied to the analysis of different ontological domains. In the conclusive section, I distinguish between an ontological and a metaphysical interpretation of this view, stressing the advantages of the former.

## 1. The Problem of the Qualities

The guiding thread of this Special Issue is the observation that the notion of *quality* constitutes the title of a fundamental and pressing problem for contemporary philosophy. Why is it so? To introduce this problem, let me refer to the literary description of an ordinary, but powerful, experience that we can find in a famous passage from Proust’s *In Search of Lost Time*. At the very beginning of this masterwork, the narrator tells about a winter day, in which he is “weary” after “a dull day” with “the prospect of a depressing morrow”. At his return at home, seeing that he is cold, his mother offers him a cup of warm tea,

<sup>†</sup> University of Florence, Italy.

accompanied by one of those little cakes called “petites madeleines”. The narrator then tells that suddenly, after tasting a spoonful of the warm tea in which he had soaked a morsel of the cake, “a shudder” runs through his whole body, and “an exquisite pleasure” invades his senses. His previous mood, then, radically changes, being substituted by a state of happiness “in whose presence other states of consciousness melted and vanished”. The passage continues with the efforts put by the narrator on understanding the reasons for this intense experience, when suddenly the memory of the events of the past to which that experience was linked re-emerge to his mind<sup>1</sup>.

I refer to this passage because it expresses how our ordinary experience, and the language through which we communicate it, is totally pervaded with qualities, which pertain to it at various levels and that can be referred, at the same time and for the most part ambiguously, to subjective experience *and* the experienced reality. The objects of perception (the tea, the cake) are characterized by colors, smells, tastes, etc. At the same time, these qualities are perceived through subjective sensations that continuously change in relation to internal and external conditions, and this is testified by the fact that the same ordinary expressions such as “yellow”, “warm”, etc. refer to both subjective sensations and to objectual properties. Furthermore, the whole experience is pervaded by various qualities that range from bodily sensations (the “shudder” in the previous passage, but we can think of sensations of pleasure, pain, and tickles, itches, etc.) to feelings, emotions and moods<sup>2</sup>.

What philosophical account of these different qualities of experience and/or reality can be given? To raise the problem of the quality means to raise the general and original problem of the relation between appearance and reality, which is a classic and fundamental issue of philosophy since ever. In particular, since the very beginning of the philosophical enterprise, the reflection on the relation between subjective experience and its objects gives rise to difficult problems. Starting from the analysis of ordinary perception, the inquiry into its nature draws immediately the attention to phenomena such as the (intrapersonal) *perceptual relativity*: I believe that the lemon in front of me is yellow, that it has an oval shape, etc. but simply moving around it and

<sup>1</sup> The quotations are from *Remembrance of Things Past*, transl. by C. K. Scott Moncrieff, Terence Kilmartin, and Andreas Mayor (Vol. 7). New York: Random House, 1981 (3 vols).

<sup>2</sup> The brief characterization here outlined of the qualities of experience and reality does not want to be exhaustive and rigorous, but I am using it just as a sketch for introducing the problem of the qualities.

prosecuting the perceptual experience I realize that its perceptual appearance (its color, shape, smell, etc.) continuously changes in relation to different sources of variation (the ambient light, my position in space, the state of adaptation of my senses - such as the adaptation to the light of my eyes - etc.)<sup>3</sup>. Furthermore, the reflection on perceptual experience soon leads to highlight the possibility of phenomena such as illusions and hallucinations. All these phenomena constitute the so-called “problem of perception” (see Crane, 2011), which leads to question the relation between appearance and a supposed mind-independent reality, giving rise to the crucial issue of scepticism, which in turn lays at the heart of the general “problem of knowledge”.

## 2. The Clash of Two Images

The reflection on the problem of perception, then, leads to question the relation between subjective experience and a supposed mind-independent reality. In front of this problem, a classic option, which can be traced back to the ancient atomism, consists on distinguishing between two different kinds of properties of the appearing objects of perception: qualitative properties such as colors, smells, sounds, etc. - conceived as merely subjective appearances, internal to the mind of the experiencing subject – and quantitative, physical-mathematical properties (spatial extension, mass, shape, location, number, etc.) – conceived as objective properties of mind-independent objects. This classic view, then, constitutes a kind of *internalism about qualities* (or *qualia internalism*), which conceives the sensible qualities of the objects of experience as subjective sensations, whose appearance within the subject’s mind is caused by events in the material-physical realm (conceived as a-qualitative).

This is, precisely, the classical philosophical option that is taken back by many thinkers at the beginning of the Modern Era, and that is put, in particular, by Galileo at the heart of the modern scientific enterprise. For Galileo, exactly, the «book of nature» is written in «the language of mathematics», whose characters «are triangles, circles and other geometrical figures» (Galilei, 1960). At the same time, the qualitative properties of the objects of perception must be

<sup>3</sup> These are different sources of *intrapersonal* variation. For the detailed analysis of different kinds of perceptual relativity in the specific case of color vision (*intrapersonal*, *interpersonal* and *interspecies*) see (Varela & Thompson, 1990; Thompson, Palacios, & Varela, 1992; Cohen, 2004, 2007, 2010, 2012).

conceived as merely subjective appearances, internal to the perceiver's mind. Galileo claims that:

To excite in us tastes, odors, and sounds I believe that nothing is required in external bodies except shapes, numbers, and slow or rapid movements. I think that if ears, tongues, and noses were removed, shapes and numbers and motions would remain, but not odors or tastes or sounds. The latter, I believe, are nothing more than names when separated from living beings [...] many sensations which are supposed to be qualities residing in external objects have no real existence save in us, and outside ourselves are mere names. (Galilei, 1960)

Indeed, the thesis that mathematics constitutes the “language” in which “the book of nature” is written can be also interpreted in merely instrumentalistic terms, as just pointing to a useful *method* for investigating and “saving the phenomena”. As Husserl (1976) claims, however, in the modern tradition the realistic-metaphysical interpretation of the object of mathematical physics, with the expulsion of the sensible qualities from the ontology of nature, is prevalent<sup>4</sup>. Indeed, it is the view endorsed and developed by authors such as, among others, Descartes, Gassendi, Hobbes, Boyle and Locke.

In his *Philosophy and the Scientific Image of Man*, Wilfrid Sellars (1962) calls this view the “scientific image of the world”, arguing that the clash between it and the “manifest image”, which is grounded on our ordinary experience, constitutes the most difficult and pressing problem for the contemporary philosophy. In particular, referring to Sellars's terminology, I stress the fact that it refers, in fact, to *a certain* scientific image, which is based on a specific conception of knowledge and a consequent ontology of nature (merely physical-mathematical and a-qualitative), conceived as a description of nature in itself. This interpretation of the “scientific image”, then, constitutes a metaphysical version of scientific realism<sup>56</sup>.

The consequence of the foundation of the scientific image so conceived, then, is the neat separation between subjective experience (qualitative) and objective reality (devoid of sensible qualities). However, the mathematization of

<sup>4</sup> An interpretation that, for Husserl, aiming at grasping «the true being of nature itself», takes «for *true being* what is actually a *method*» (Husserl, 1976, p. 44, 51).

<sup>5</sup> On the distinction between empirical and metaphysical versions of scientific realism see (Parrini, 1998, p. 115 ss.; 2002, chap. 3).

<sup>6</sup> Indeed, as the reader can see throughout this Issue, different conceptions of the scope and the cognitive significance of the natural sciences are possible, together with different ontological conceptions of nature and matter (which lead, therefore, to different “scientific images”, which go beyond the Galilean abstraction).

nature, with the concomitant expulsion of the sensible qualities from its ontology, which constitutes the founding act of modern science and philosophy in much of their development, is deeply problematic. The psychologization of the qualities, which traces them back to the merely mental sphere and removes them from the domain of external reality, has serious consequences on our conception of the world, and of the place of man in it, having deep implications on the meaning and value of our life and experience. As Husserl claims, exactly, Galileo's doctrine «of the merely subjective character of the specific sense-qualities, which soon afterward was consistently formulated by Hobbes as the doctrine of the subjectivity of all concrete phenomena of sensibly intuitive nature and world in general» implies that «[t]he phenomena are only in the subjects; they are there only as causal results of events taking place in true nature, which events exist only with mathematical properties» (Husserl, 1976, p. 53-54). But, for Husserl, the consequences of this theoretical move are huge, since they concern nothing less than the meaning and value of our life:

If the intuited world of our life is merely subjective, then all the truths of pre- and extrascientific life which have to do with its factual being are deprived of value. They have meaning only insofar as they, while themselves false, vaguely indicate an in-itself which lies behind this world of possible experience and is transcendent in respect to it. (Husserl, 1976, p. 53-54)

### 3. The Place of Qualities in the Mind

The problem of the epistemological and ontological status of the qualities is also at the heart of the contemporary debate in the philosophy of mind, in relation to the crucial issues of *naturalism* and *reductionism*. The so-called “hard problem” of phenomenal consciousness (Chalmers, 1995), in particular, arises when we preliminarily assume a certain (physicalistic) conception of Nature, to later ask about the “location” of the mind in it<sup>7</sup>.

Indeed, all the debate on naturalism and the naturalization of the mind is based on the standard presupposition of the physicalistic conception of Nature. This is because, once one has defined Nature as an objective, mind-independent domain that is devoid of all the qualitative properties that essentially depend on the relation with first-person experience, the relation that exists between this

<sup>7</sup> This is, precisely, the issue enclosed in the title of Broad's *The Mind and its Place in Nature* (Broad, 1925), restated by Chalmers as the issue of the place of *phenomenal consciousness* in Nature (Chalmers, 2003).

domain and the subjective experience becomes problematic. In particular, as is well known, the hard problem for naturalism – conceived as a monistic metaphysical view which admits only physical matter as the ontological “stuff” of all reality – consists in the difficulty of reducing to the domain of physics those qualitative properties that have been preliminary expelled from the ontological furniture of the world (the so-called “qualia”).

The connection between physicalism and the problem of phenomenal consciousness is clearly stated, for example, by Chalmers: «On the most common conception of nature, the natural world is the physical world», and, at the same time, «consciousness fits uneasily into our conception of the natural world» (Chalmers, 2003, p. 102). More recently, Kriegel has defined the *naturalistic location strategy* in the philosophy of mind thus:

[It] is a matter of identifying [a puzzling phenomenon] with some phenomenon also describable in such a way that [...] [it], as thus alternatively described, counts as “non-mysterious” and “kosher” within a metaphysical perspective that gives pride of place to natural science [...]. Naturalistic location thus involves taking the vocabulary of the natural sciences to be the privileged vocabulary in serious metaphysics. (Kriegel, 2013, p. 4)

It is by presupposing this prevalent paradigm that, therefore, different options for the naturalization of subjectivity are evaluated in the philosophy of mind: eliminativism, reductivism, non-reductive naturalism (such as Chalmers’ “naturalistic dualism of properties”, and various forms of strong-ontological emergentism<sup>8</sup>). Here I just want to stress the fact that all these options are based on the presupposition of a certain, a-qualitative, conception of material nature (in order to investigate, in case, the ontological status of the qualities of experience, conceived as internal properties of the mind).

Therefore, the physicalistic conception of matter, and the consequent ontology of nature, is based on a specific conception of knowledge. Specifically, scientific realism and naturalism presuppose, as we have seen, the idea that the qualities of the appearing objects of perceptual experience are merely subjective. Therefore, as I said, they presuppose an *internalism about qualities* (or *qualia internalism*). In this case, then, a certain ontological view (defined as the theory of reality or Being) depends on a certain epistemology (theory of

<sup>8</sup> On strong or ontological emergentism see, for example, (Broad, 1925; Chalmers, 2006; O’Connor & Wong, 2006; Stephan, 2004).

knowledge). But this relation between epistemology and ontology can be generalized in order to argue, as I shall do in the following, that to know “what there is” (ontology) we have to question, first, the conditions of possibility of our knowledge of what there is. That is: epistemology comes first<sup>9</sup>.

#### 4. Externalism About Qualities and Naïve Naturalism

The problematization of the epistemological presuppositions of the physicalistic ontology of nature leads to investigate different possible alternatives. Indeed, all the authors of the essays collected in this Issue explore different options for accounting for the qualities, in contrast to those scientific and philosophical abstractions that expelled them from the ontology of nature.

In particular, another classic option is constituted by different forms of naïve realism, which are based on a kind of *externalism about qualities* (or *qualia externalism*<sup>10</sup>). This conception, exactly, constitutes another classic option in philosophy for accounting for the “problem of perception”. According to it, notwithstanding the phenomena of perceptual relativity, illusion and hallucination, veridical perception puts us directly in contact with external, mind-independent objects, which are endowed with both qualitative and quantitative properties. This view, then, constitutes a kind of *direct* or *naïve realism*, which can be put at the basis of a conception of the natural world that is more faithful to the common-sense, “manifest” image. It can be put, then, at the basis of a kind of *naïve naturalism*.

Of course, however, when naïve realism is elaborated in relation to the problem of knowledge, it has to be developed as a sophisticated theory that is able to account for phenomena such as relativity, illusion and hallucination. In particular, in the philosophy of mind and perception an articulated proposal of this kind can be found in Gibson’s ecological theory of direct perception (Gibson, 1967, 1972), which is explicitly elaborated as a defence of naïve realism (i.e. the «naïve belief in the world of objects and events» and the «simple-minded conviction that our senses give knowledge of it» (Gibson, 1967, p.

<sup>9</sup> Obviously, I take this conception of the relation between epistemology and ontology or metaphysics from Kant’s transcendental idealism, with the thesis that the critique of knowledge comes before any ontological inquiry. I shall develop this point below.

<sup>10</sup> The latter expression is used by Dretske, who argues for a kind of *externalist representationalism* (Dretske, 1995, 1996, 2003). Here I cannot develop a detailed analysis of Dretske’s view, which, in my opinion, turns out to be either a kind of *eliminativism* about qualia, or another kind of *qualia internalism*. For some criticisms to Dretske’s view see (Mcintyre, 1999; Williford, 2013).

168). In the contemporary debate, Gibson's theory of direct perception is reprised and developed by many authors. For example, the proponents of the so-called "sensorimotor account" (Noë & O'Regan, 2002; O'Regan & Noë, 2001) develop a specific version of the enactivist view that, differently from the original proposal of Varela, Thompson and Rosch (Varela & Thompson, 1990; Varela, Thompson, & Rosch, 1991; Thompson, Palacios, & Varela, 1992) – as we will see soon – conceives of perception as a direct relation with an external environment that is endowed with certain pre-given, qualitative properties. Other authors that argue for a kind of direct-naïve realism are, for example, Searle (2012, 2015) – whose last book is significantly entitled *Seeing Things As They Are* – and some proponents of a realistic and naturalized interpretation of Husserlian phenomenology (Petitot & Smith, 1997; Petitot, 1995, 1999; Smith, 1995, 1999).

In particular, Jean Petitot and Barry Smith have proposed a specific interpretation and development of phenomenology, which aims at being a peculiar strategy for the naturalization of the mind. Specifically, their naturalized version of phenomenology aims at naturalizing consciousness through an «enlargement of the concept of nature» and a «phenomenalization of physical objectivity» (Roy, Petitot, Pachoud, & Varela, 1999, p. 68-69). These authors, in particular, argue for a realistic interpretation of Husserlian phenomenology – which draws on Gibson's theory of direct perception – with a view to accounting for the macroscopic structuration of nature, which is *qualitative* and *morphological*:

Our thesis is that phenomenal manifestation is also a mode of manifestation of matter and that there can indeed exist a sort of phenomenal physics. This phenomenal physics is of course different from standard fundamental physics: it is qualitative, macroscopic and emergent. Yet it is, nonetheless, objective. (Petitot & Smith, 1997, p. 241) <sup>11</sup>

<sup>11</sup> I have to specify that Petitot is cautious regarding the issue of realism, admitting also a 'Kantian reading' of the notion of objective reality that is involved by the phenomenal physics (Petitot & Smith, 1997, p. 239, 248). Smith (1995, 1999), on the contrary, explicitly endorses a metaphysically realist interpretation of the *phenophysics*, claiming that it corresponds to the commonsensical view of the world conceived «as embracing a plurality of enduring substances possessing sensible qualities and undergoing changes (events and processes) of various sorts, all existing independently of our knowledge and awareness and all such as to constitute a single whole that is extended in space and time» (Smith, 1995, p. 305).

In this way, these authors propose a «new sort of emergentist position» (Petitot & Smith, 1997, p. 233), which aims at accounting for the qualitative dimension of the objects of perceptual experience and, therefore, of nature. They call this view *phenophysics* or *qualitative ontology*: an ontological conception of the natural world that is similar to pre-Galilean accounts of the common-sense world<sup>12</sup>. Furthermore, these authors consider their approach as a fruitful basis not only for the investigation of nature but, also, of the place of subjectivity in it. They conceive it, then, as a strategy for the naturalization of consciousness and, therefore, of phenomenology (both in the wide sense that is common in the philosophy of mind, and in the narrow sense that refers to the philosophical enterprise inaugurated by Husserl). In the view proposed by these authors, then, the qualities must be conceived as pertaining to both nature and the mind<sup>13</sup>.

In synthesis, then, direct-naïve theories conceive of perception as a direct relation – not mediated by any internal content and by any subjective, constitutive function – between the mind and a qualitative world, which is endowed with all the properties that appear to us in perception. The difficulties of this view, however, consist precisely in the “problem of perception” (relativity, illusion, hallucination). The fact that the perceptual dynamic implies a continuous flow of appearances (subjective sensations), which are relative to various subjective and environmental conditions, and which can be present also in un-veridical cases (illusion, hallucination) leads to formulate a distinction between the supposed properties of mind-independent objects and the subjective appearances. The central thesis of direct theories of perception such as Gibson’s, on the contrary, is that subjective qualities do not play an essential, constitutive role in the perception of mind-independent objects<sup>14</sup>.

<sup>12</sup> See Petitot & Smith (1997), Petitot (1999) for the details of their analyses, based on the mathematical ideas of René Thom and on Husserl’s phenomenological mereology. Furthermore, Smith develops the project of a qualitative ontology by crucially referring to the tradition of Gestalt psychology and, in particular, to the Berlin school (of Wertheimer, Koffka and Köhler), which conceived the Gestalten as objective structures of the external reality, in contrast to the “production theory” of the Graz school (see Smith, 1988). I shall briefly return to this point below.

<sup>13</sup> Also Searle, within his defence of a kind of direct realism and, therefore, of a kind of *naïve naturalism*, develops a naturalistic conception of the mind, by developing a peculiar kind of emergentism (see Searle, 2012).

<sup>14</sup> In case, according to these theories, combined also with the so-called “disjunctive thesis”, internal appearances play a constitutive role only in the un-veridical cases.

However, here an objection to the descriptive adequacy of the model of direct perception can be formulated by referring to the tradition of transcendental philosophy. Direct-naïve theories, in fact, hardly account for the role of subjective functions in perception. The transcendental line of argument, on the contrary, stresses the essential role that subjective appearances play in the *constitution* of the objectual correlates of perception, in both veridical and un-veridical cases. Specifically, according to Kantian transcendental philosophy (also in its development in Husserlian transcendental phenomenology), transcendental functions of subjectivity constitute «conditions of the *possibility of experience*» that are «at the same time, conditions of the *possibility of the objects of experience*» (Kant, 1998, A158/B197)<sup>15</sup>.

In this way, the transcendental problematization of the theories of direct perception (and of their consequent form of naïve realism and naturalism), leads to highlight the fact that, similarly to the metaphysical version of scientific realism - which leads to physical-mathematical naturalism - these theories lead to another kind of metaphysical realism – in the form of naïve naturalism – that is highly problematic. This is because, like any kind of metaphysical realism that aims at being an account of reality in itself, this view clashes with sceptical objections, which question the possibility of transcending those conditions of knowability of reality that depend on the constitution of (human) subjectivity, in order to grasp a supposed reality “in itself”. And this is because, as Preti claims, scepticism and metaphysical realism can be conceived as «two sides of the same coin» (Preti, 1974, *my translation*)<sup>16</sup>.

<sup>15</sup> It is worth noticing that an intentional model of the relation subject-object in perception, which recognizes the essential role of subjective functions, is present in the Graz school of Gestalt psychology, which, in contrast to the Berlin school, developed a “production theory” (see Smith, 1988) which has much in common with the Husserlian phenomenology of the constitution.

<sup>16</sup> In the words of Parrini: «[t]here cannot be an overcoming of the skeptical instance as long as we get stuck in a framing of the problem of knowledge that is based on the ‘dogmatic’ assumption of a knowing subject opposed to the ‘existence *in itself* of a real world that is independent from the act of knowledge’ (Preti, 1974). It is this ontologically doomed framing of the problem of knowledge that legitimates the skeptical instance [...]. This is especially clear when we consider the scholastic formula *veritas est adaequatio rei et intellectus* as criterion of truth: ‘thought, to be precise, doesn’t contain any criterion to establish the *adaequatio*, exactly because it has its own criterion outside of itself, in the *res*’. Reality has to be *caught, grasped*, but we can never know ‘if we caught a real thing or a shadow’ (Preti, 1974). For this reason, metaphysical realism and skeptical instance have to be conceived as ‘two sides of the same coin’ (Preti, 1974)». (Parrini, 2002, p. 72, *my translation*).

## 5. The Enactive Approach to Qualitative Ontology

The transcendental problematization of direct-naïve realism (and naturalism), with its externalism about qualities (that conceives of them as objective properties of nature “in itself”) leads to consider, therefore, other alternatives. In particular, the enactive approach constitutes such an alternative account, thanks to its conception of the relation between subject and object as a *dependent co-origination* in the process of experience. Specifically, the original formulation of this view is developed, by Varela and Thompson, in relation to a specific qualitative field: the domain of color vision and color ontology (considered as a “case study for cognitive science”; Varela & Thompson, 1990; Thompson et al., 1992). Precisely, in the analyses of color perception that preceded *The Embodied Mind* (Varela et al., 1991), these authors propose a specific conception of the relation of subject and object in perception that avoids the pitfalls of both subjectivism and objectivism about color. These notions, precisely, correspond, in the the domain of color vision, to the alternatives that I have previously called *internalism* and *externalism* about sensible qualities<sup>17</sup>.

In the enactive view of color (which can be generalized to all the sensible qualities of the objects of perception), then, colors are properties that result from the co-determination of a living organism and its environment. In this view, in particular, the environment that is perceived by a living organism must not be conceived as a domain that pre-exists the cognitive relation. Notwithstanding some ambiguities in their proposal, in fact, the original formulation of the enactive approach is radically *relationist*, since it conceives the entire perceptual environment that is *enacted* by an organism as relational, in all of its aspects (qualitative and quantitative), and not as distinct and caused by a supposed pre-given world (i.e. a metaphysical reality “in itself”).

By analysing the case of color vision, then, the enactivists – in this original formulation of the view, which I qualify as *transcendental*– propose a view of the relation perceiver-environment as reciprocal *enactment* or *dependent co-origination*. In particular, these authors carefully distinguish the enactive view of color, which they call also «ecological experientialism», from both «the “internalist” view that perceptual content is provided by subjective qualities (qualia)» (Thompson et al., 1992, p. 402) – i.e. the internalism about qualities – and from a kind of direct-naïve realism such as Gibson’s – and, I add, also from

<sup>17</sup> On the different forms of *color subjectivism* (dispositionalism, relationalism) and *color objectivism* (color physicalism, primitivism) see (Cohen, 2004, 2007, 2010, 2012; Maund, 2012).

its development in the so-called “sensorimotor account” of Noë and O’Regan (Noë & O’Regan, 2002; O’Regan & Noë, 2001). In particular, concerning the latter view, Varela and Thompson criticize «Gibson’s belief that the only alternative to the mistaken sense-data view of perception is direct realism [...]» (Thompson et al., 1992, p. 399). In contrast to the development of the ecological view of perception into a kind of direct-naïve realism, indeed, the (transcendental) enactivists claim that:

Our approach [...] takes from Gibson the deep insight that perception must be understood within the ecological context of guided activity, but we develop this insight [...] by treating the environment not simply as the ecological setting for animal activity, but also as something determined by that very activity. (Thompson et al., 1992, p. 399)

In particular, in my opinion this passage must be interpreted in a strong sense: the environment that is perceived by a living organism is not a pre-given external domain, but arises together with the perceiver in the perceptual relation. Indeed, in the enactive view perceiver and environment are not pre-given, substantial domains that somehow enter in relation in perception, but they are processes that *dependently co-arise*. The central thesis of the enactive approach, exactly, is that «knower and known, mind and world, stand in relation to each other through mutual specification or dependent coorigination» (Varela et al., 1991, p. 150).

The crucial concept, then, is that of *dependent co-arising*, which translates the notion of *pratityasamutpada*: a central concept of Buddhist thought and especially of the Madhyamaka philosophy. The reference to this tradition is not marginal in *The Embodied Mind*, constituting the framework within which the enactivists develop their entire proposal. In particular, the enactive view is elaborated as a general philosophical framework for rethinking the relation between subject and object, by deconstructing the concept of them as substantial, pre-given and independent realities, and substituting the concept of a neat duality of subject-object with the strong relationist and processual view that is expressed by the notion of dependent co-arising. Indeed, the enactivists take back from Nagarjuna, the founder of the Madhyamaka, a deconstructive dialectic whose aim consists on showing the emptiness of substantial reality (*sunyata*) of both subject and object, mind and world<sup>18</sup>.

<sup>18</sup> On the Madhyamaka (and enactivism) see also (Bitbol, 2003, 2007, 2008, 2012).

Here I will not enter into the details of the enactive proposal in relation with the Madhyamaka relationism, and I shall highlight only some crucial aspects of this view. In particular, I stress the fact that the arguments that lead to the deconstruction of the duality of subject-object conceived as substantial poles of the cognitive relation are based on an analysis of the structure of experience, and that they assume a transcendental import<sup>19</sup>. These arguments, exactly, lead to claim the fundamental *correlation* between subject and object, which are not substantial, pre-given domains, and which dependently co-emerge in the process of experience.

In particular, in my view, the original (transcendental) version of the enactive approach can be fruitfully combined also with Husserlian genetic and transcendental phenomenology, which leads too to a conception of the relation between subject and object as *genetic co-constitution*. In particular, by investigating the temporal genesis of experience and the “genesis of the constitution” (Husserl, 2001), Husserl’s view leads to conceive the genesis of both subject and object as a co-constitution in reciprocal dependence, in the same temporal process that is, exactly, a dependent co-origination<sup>20</sup>.

## 6. Lines of Development of the Enactive Ontology

The enactive approach, therefore, offers a specific, relationist and processual account of the relation between subjective experience and experienced reality, avoiding the pitfalls of both subjectivism and objectivism. In particular, in contrast to both internalism and externalism about qualities, the transcendental version of enactivism (combined with genetic phenomenology) leads to a strong relationism about qualities, and about all the properties of experience and reality in general. And, in this way, this view constitutes a fruitful and promising approach for developing the ontological inquiry. In my view, in particular, this approach can be applied to the analysis of different ontological domains (or “regional ontologies”, in Husserl’s terminology). Indeed, the enactive framework is explored and developed by different essays collected in this Issue, in relation to the rethinking of the categories through which we account for the qualitative dimension of experience and reality.

<sup>19</sup> On Nagarjuna’s arguments see especially (Varela et al., 1991, p. 221 ss.; Bitbol, 2003, p. 339).

<sup>20</sup> I argued for this interpretation of genetic phenomenology in my PhD dissertation (*Experience and Becoming. A Path Through Enactivism and Genetic Phenomenology*, discussed the 7.03.2016 at the University of Florence), and I am further developing it in a forthcoming work.

The enactive approach, in particular, leads especially to rethink the notions of *nature* and *matter*, in view of developing a qualitative ontology of nature. In this context, a central role is assumed by the reflection on the biological domain, with the possibility to investigate concepts such as organism, life and evolution in ways that crucially involve the qualitative dimension, conceived in the terms of the reciprocal enactment of organism and environment. This line of investigation, in my view, also opens the possibility of rethinking the biological accounts of the emergence and the evolution of the living, by investigating the crucial role of the *sentience* in natural selection.

### 7. An Open Issue: Ontology or Metaphysics?

In conclusion, I want to point out to an open issue that arises when we expand on the ontological implications of the enactive view. I already claimed that the development of this conception in the direction of a kind of direct-naïve realism and naturalism, especially in the sensorimotor account, enters in conflict with some fundamental tenets of the original enactive proposal. In particular, it goes against the thesis that organism and environment are not two substantial, pre-given domains that pre-exist the enactive relation. As a consequence, for the enactive view the environment is not directly perceived but *enacted* in a strong sense. Now, I want to consider another possible ontological interpretation of this view, which goes in the direction of another kind of naturalistic monism (alternative to both scientific and naïve naturalism).

In particular, the qualitative ontology of nature that emerges from the enactive approach can be developed by drawing also on different views that point too toward an overcoming of the neat duality of subject and object, by substituting it with the admission of an ontological level that precedes and grounds both. I refer, in particular, to the *process philosophies* (in authors such as Whitehead, Bergson, Merleau-Ponty) and to the tradition of *neutral monism* (in Mach, James, Russell; see Stubenberg, 2014). The combination between these views can lead to a kind of neutral-process monism that is very near to the enactive view, since it admits a domain of reality that is neither subjective nor objective, and from which they both co-emerge in a process of dependent co-origination.

However, this neutral-processual monism can be developed in two different ways: a metaphysical version, and an ontological version. To develop this point, in particular, I shall use a specific way of distinguishing between ontology (conceived as a theory of the constitution of reality) and metaphysics (conceived

as the theory of the ultimate or absolute Being). I define, then, the metaphysics as the theory that aims at grasping the ultimate dimension of reality “in itself”. The metaphysical version of the neutral-process monism, then, would constitute a neutral-process metaphysics that aims at being a theory of the ultimate-absolute reality.

However, I have already claimed that a metaphysical realism of this kind is always at risk of reversing into scepticism, being for this reason as problematic as both scientific and naïve realism and naturalism. The other option – which I favour – on the contrary, consists on stressing the transcendental delimitation of our possibilities of knowledge to the relational domain of the *empirical* (and not metaphysical) reality. This is, exactly, an anti-foundationalist standpoint that is much present in *The Embodied Mind*, where it is motivated through the reference to the concept of emptiness as *groundlessness* in the Madhyamaka<sup>21</sup>.

So conceived, then, the enactive ontology becomes a theory of the constitution of reality, which can admit a monistic metaphysical dimension from which both subject and object co-emerge, without laying any knowledge claim about it. I suggest, then, that the enactive ontology can (and must, in my opinion) be distinguished from a metaphysical view of the absolute-ultimate reality. In particular, concerning this ultimate Being that somehow “precedes” the co-emergence of subject and object in the process of experience, the view here outlined can remain *agnostic*, claiming that we are confined to the ontological (not metaphysical) domain of experience and its objects.

Indeed, the reflection on the structure of experience, in its *passive* dimension, testifies that it depends on the being of a reality that *transcends* the subjective sphere and that, therefore, does not depend for its existence on our subjective activity (in contrast to a kind of subjective-metaphysical idealism). However, the agnostic position claims that, concerning this ultimate reality, we cannot say much, being limited to the knowledge of the empirical-ontological domain in which subject and object dependently co-emerge<sup>22</sup>. Within this

<sup>21</sup> Bitbol (2003) stresses too the anti-metaphysical aspect of the Madhyamaka teachings, claiming that, combined with Kantian philosophy and also with a specific interpretation of quantum mechanics, they constitute a strong relationist view that is a “cure for metaphysical illusions” (Bitbol, 2003).

<sup>22</sup> A similar view can be found in Zhok (2015), who argues for a «phenomenologically based quasi-Spinozian vision» that assumes «the subsistence of a transcendent sphere» (Zhok, 2015, p. 75, 54). Developing this view in relation, in particular, to the issues of causation and mental causation, Zhok claims that «we have reasons to concede the transcendent subsistence of a unitary ontological background where all efficacious relations take place», but that «we have no reasons, apart from

delimitation of our inquiry to the domain of experience, in its dual structure of subject-object, it is possible, then, to exploit the potential developments of the enactive ontology, avoiding the pitfalls of a metaphysical-absolute view that would be always vulnerable to skeptical objections.

#### REFERENCES

- Bitbol, M. (2003). A Cure For Metaphysical Illusions. Kant, Quantum Mechanics, and the Madhyamaka. In B. A. Wallace (Ed.), *Buddhism and Science: Breaking New Ground*. New York: Columbia University Press, 325-361.
- Bitbol, M. (2007). Ontology, matter and emergence. *Phenomenology and the Cognitive Sciences*, 6(3), 293–307.
- Bitbol, M. (2008). Is consciousness primary? *NeuroQuantology*, 6(1), 53–71.
- Bitbol, M. (2012). Neurophenomenology, an Ongoing Practice of/in Consciousness. *Constructivist Foundations*, 7(3), 165–173.
- Broad, C. D. (1925). *The Mind and its Place in Nature*. London: Routledge & Kegan Paul.
- Chalmers, D. J. (1995). Facing Up to the Problem of Consciousness. *Journal of Consciousness Studies*, 2(3), 200–219.
- Chalmers, D. J. (2003). Consciousness and its Place in Nature. In *Blackwell Guide to Philosophy of Mind*. Blackwell.
- Chalmers, D. J. (2006). Strong and Weak Emergence. In P. Clayton & P. Davies (Eds.), *The Re-emergence of Emergence*. Oxford: Oxford University Press.
- Cohen, J. (2004). Color Properties and Color Ascriptions: A Relationalist Manifesto. *The Philosophical Review*, 113(4), 451–506.
- Cohen, J. (2007). A Relationalist's Guide to Error About Color Perception. *Nous*, 41(2), 335–353.
- Cohen, J. (2010). Color relationalism and color phenomenology. In B. Nanay (Ed.), *Perceiving the World*. Oxford: Oxford University Press.

contingent cultural congeniality, to accept that this ontological background is 'physical'» (Zhok, 2015, p. 58). Concerning the possibility of knowing more about this ontological background, then, Zhok argues that we can claim at most that «mental properties [...] supervene on transcendent featureless Being», and that «[o]f such Being we are entitled to say just that it has 'efficaciousness' of some kind: it produces 'effects'» (Zhok, 2015, p. 58)

- Cohen, J. (2012). Précis of The Red and the Real: An Essay on Color Ontology. *Analytic Philosophy*, 53(3), 288–296.
- Crane, T. (2011). The Problem of Perception. In *Stanford Encyclopedia of Philosophy*. Metaphysics Research Lab, CSLI, Stanford University.
- Dretske, F. (1995). *Naturalizing the Mind*. Cambridge, MA: The MIT Press.
- Dretske, F. (1996). Phenomenal Externalism or If Meanings Ain't in the Head , Where Are Qualia? *Philosophical Issues*, 7(Perception), 143–158.
- Dretske, F. (2003). Experience as Representation. *Philosophical Issues*, 13(Philosophy of Mind), 67–82.
- Galilei, G. (1960). The Assayer. In C. D. O'Malley (Ed.), *The Controversy on the Comets of 1618*. Philadelphia: University of Pennsylvania Press.
- Gibson, J. J. (1967). New Reasons for Realism. *Synthese*, 17(2), 162–172.
- Gibson, J. J. (1972). A Theory of Direct Visual Perception. In J. R. Royce & W. W. Rozeboom (Eds.), *The Psychology of Knowing*. New York: Gordon & Breach.
- Husserl, E. (1976). *Die Krisis der europäischen Wissenschaften und die transzendente Phänomenologie. Eine Einleitung in die phänomenologische Philosophie (1934-37) (Hua VI)*. Den Haag: Martinus Nihoff.
- Husserl, E. (2001). *Analyses Concerning Passive and Active Synthesis: Lectures on Transcendental Logic*. (A. J. Steinbock, Ed.). Dordrecht: Springer.
- Kant, I. (1998). *Critique of Pure Reason*. (P. Guyer & A. Wood, Eds.). Cambridge: Cambridge University Press.
- Kriegel, U. (2013). The Phenomenal Intentionality Research Program. In U. Kriegel (Ed.), *Phenomenal Intentionality*. Oxford: Oxford University Press.
- Maund, B. (2012). Color. In *Stanford Encyclopedia of Philosophy*. Metaphysics Research Lab, CSLI, Stanford University.
- Mcintyre, R. (1999). Naturalizing Phenomenology ? Dretske on Qualia. In J. Petitot, F. J. Varela, J.-M. Roy, & B. Pachoud (Eds.), *Naturalizing Phenomenology: Issues in Contemporary Phenomenology and Cognitive Science*. Stanford: Stanford University Press, 429–439.

- Noë, A., & O'Regan, J. K. (2002). On the Brain-Basis of Visual Consciousness: a Sensorimotor Account. In A. Noë & E. Thompson (Eds.), *Vision and Mind: Selected Readings in the Philosophy of Perception*. Massachusetts: MIT Press, 567-598.
- O'Connor, T., & Wong, Y. H. (2006). Emergent Properties. In *Stanford Encyclopedia of Philosophy*. Metaphysics Research Lab, CSLI, Stanford University.
- O'Regan, J. K., & Noë, A. (2001). A Sensorimotor Account of Vision and Visual Consciousness. *Behavioral and Brain Sciences*, 24, 939-1031.
- Parrini, P. (1998). *Knowledge and Reality. An Essay in Positive Philosophy*. Dordrecht: Kluwer Academic Publishers.
- Parrini, P. (2002). *Sapere e interpretare. Per una filosofia e un'oggettività senza fondamenti*. Milano: Guerini.
- Petitot, J. (1995). La réorientation naturaliste de la phénoménologie. *Archives de Philosophie*, 58(4), 631-658.
- Petitot, J. (1999). Morphological Eidetics for a Phenomenology of Perception. In J. Petitot, F. J. Varela, J.-M. Roy, & B. Pachoud (Eds.), *Naturalizing Phenomenology: Issues in Contemporary Phenomenology and Cognitive Science*. Stanford: Stanford University Press.
- Petitot, J., & Smith, B. (1997). Physics and the phenomenal world. In R. Poli & P. M. Simons (Eds.), *Formal Ontology*. Dordrecht: Kluwer, 233-254.
- Preti, G. (1974). Lo scetticismo e il problema della conoscenza. *Rivista Critica Di Storia Della Filosofia*, 29, 3-31, 123-143, 243-263.
- Roy, J.-M., Petitot, J., Pachoud, B., & Varela, F. J. (1999). Beyond the gap: An Introduction to Naturalizing Phenomenology. In J. Petitot, F. J. Varela, B. Pachoud, & J.-M. Roy (Eds.), *Naturalizing Phenomenology: Issues in Contemporary Phenomenology and Cognitive Science*. Stanford (CA): Stanford University Press.
- Searle, J. R. (2012). Perceptual intentionality. *Organon F*, 19(SUPPL. 2), 9-22.
- Searle, J. R. (2015). *Seeing Things as They Are. A Theory of Perception*. Oxford and New York: Oxford University Press.
- Sellars, W. (1962). Philosophy and the Scientific Image of Man. In R. Colodny (Ed.), *Frontiers of Science and Philosophy*. Pittsburgh: University of Pittsburgh Press, 35-78.

- Smith, B. (1988). Gestalt Theory: An Essay in Philosophy. In B. Smith (Ed.) *Foundations of Gestalt Theory*. Munich and Vienna: Philosophia, 11-81.
- Smith, B. (1995). The Structures of the Common - Sense World. *Acta Philosophica Fennica*, 58, 290-317.
- Smith, B. (1999). Truth and the Visual Field. In J. Petitot, F. J. Varela, B. Pachoud, & J.-M. Roy (Eds.), *Naturalizing Phenomenology: Issues in Contemporary Phenomenology and Cognitive Science*. Stanford (CA), 317-329.
- Stephan, A. (2004). Phenomenal Emergence. *Networks*, 3-4, 91-102.
- Stubenberg, L. (2014). Neutral Monism. In *Stanford Encyclopedia of Philosophy*, Fall 2014, Metaphysics Research Lab, CSLI, Stanford University.
- Thompson, E., Palacios, A., & Varela, F. J. (1992). Ways of Coloring: Comparative Color Vision as a Case Study for Cognitive Science. *Behavioral and Brain Sciences*, 15(01), 1-26.
- Varela, F. J., & Thompson, E. (1990). Color vision: A case study in the Foundations of Cognitive Science. *Revue de Synthèse*, IV(1-2), 129-138.
- Varela, F. J., Thompson, E., & Rosch, E. (1991). *The Embodied Mind: Cognitive Science and Human Experience*. Cambridge, MA: MIT Press.
- Williford, K. (2013). Husserl's hyletic data and phenomenal consciousness. *Phenomenology and the Cognitive Sciences*, 12(3), 501-519.
- Zhok, A. (2015). Phenomenological Ontology and Supervenience. *Metodo. International Studies in Phenomenology and Philosophy*, 3(2).