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Representation and Reality in Humans, Other Living Organisms and Intelligent Machines

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Matter, Representation and Motion in the Phenomenology of the Mind

Roberta Lanfredini

Abstract Not only the classical cognitive pattern but also the classical phenomenological pattern gives rise to a problem concerning the qualitative dimension. This problem is essentially related to the notion of matter, conceived as residual with respect to the notion of form: the sensorial hyle is residual with respect to the intentional form; *plena* are residual with respect to the extension, and physical matter (its resistance, its non-undifferentiation, its endurance) is also residual with respect to the broad ensemble of connections where the physical thing is inscribed. The residual component which characterizes the notion of matter is simply the other side of the absolute predominance of form (representational form in the specific context of mental phenomena). This predominance gives rise to the same problem in the context of phenomenology and in philosophy of mind: the problem of the ontological status of qualitative states. This issue is a crucial one and, in order to be solved, requires a radical change of perspective. In the context of phenomenology this change depends on the concept of enactive, embodied and situated mind. This notion implies a temporal paradigm; it alludes to a dynamic, non-static pattern; that is, it alludes not to projective notions (as in the representational model), but to notions which are agentive and, ultimately, evolutive.

1 Representation and Embodiment

In the context of the contemporary philosophy of mind, we run into an increasing number of arguments claiming a crisis of the classical cognitive and representational theory of mental events [1–7]. We must acknowledge that a large number of homogeneous notions come into play here; and those notions are all meant to provide an utterly new way of conceiving the mental dimension. Notions such as extended or ecological mind, as well as *enactive*, *embodied*, and *situated* mind, are all instruments which depict the human mind not precisely, or not only, as an

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ensemble of functions, but rather as something which takes shape by means of vibrant drives, a progressive integration with the surrounding environment, a tenacious aiming process and the safeguarding of our own movements within the space.

In this respect, we are witnessing the arising of a different paradigm which emphasizes a close connection with instincts and vital drives, at the expense of the paradigm which confines the mind to its projective and representational function. At the same time, the classical notions of mind, consciousness and representation start to be replaced by the more physical notions of organism, life and moving body. In this new scenario, cognitive processes are understood as dynamically adaptive, incarnated, deep-rooted in sensory and motor processes and situated each time in a given context. The sensory and motor paradigm, which replaces the representational one, aims at a minimal image of the *I* [8], which takes the form of a Bodily Self [9]. The latter consists in the possibility of recognizing ourselves as integrated subjectivities, endowed with sensory and motor functions [10], but also with bodily, and environmental (or ecological) capabilities; and, lastly, as subjectivities capable of carrying out a flexible integration with the environment by virtue of an incessant developmental process [11]. The paradigm emerging from the crisis of the classical cognitive system is, therefore, that of Embodied Cognition [12–15]. More precisely, it takes shape as a system which consistently diminishes transparency and lack of friction, distinctive characteristics of cognition understood as representative form, in favour of the *opacity* and *resistance* of cognition conceived as an ensemble of active opportunities and perceptive-motor capabilities.

According to this paradigmatic hypothesis, perception, instead of being conceived as a process which takes place in the brain, is to be understood as an activity which features the animal in its entirety and is, therefore, related to the exploration of its environment; the latter activity being characterized by a systematic interdependence between the sensory information at our disposal (*affordances*), as well as by a crucial pre-reflective and sub-categorical dimension [16–18]. Working in this way, Embodied Cognition claims to account, from a new standpoint, for one of the fundamental issues of the classical cognitive pattern, namely the issue of *qualia* or, as Nagel puts it, of the way *it feels* to have mental states [19]. In the following pages I will endeavor to argue that this particular issue, along with many others emerging from the cognitive and representational model, primarily depends on a certain way of conceiving the mind, and on a certain way of conceiving matter. Once a specific theory of matter is provided, it will give rise, in a perfect mirroring, to a specific theory of mind. This repercussion is crystal clear in the Cartesian framework. Descartes' notion of 'thought' is to be read as a direct consequence of his adherence to the mechanistic notion of the universe.

The fundamental idea is as follows: the physical world is a great mechanism whose functioning is mathematically depicted by Galileo's physics. In this context, *thinking* stands out as a notable exception, for it cannot be reduced to that mechanism and is, therefore, unrelated to the natural and material world. Accordingly, we may assert that the quantitative (not qualitative) and mathematical accounts

apply to everything but the human mind. This explanatory gap is the fundamental source of the conflict between the non-mechanistic notion of mind and the mechanistic notion of body. In philosophical terms, that explanatory gap takes the shape of the ontological dualism of *res cogitans* and *res extensa*. This dichotomy is the ultimate result of a twofold theoretical movement, which can be traced back to a precise notion of matter. To clarify: if the world is a pure mechanism whose functioning can be wholly described by quantitative physics, it will necessarily lose every qualitative feature; on the other hand (and bear in mind that this second movement is the consequence and not the origin of the first one), subjectivity, in order to keep liberty of thought and action, will have to shed all its material attributes, thus withdrawing from the natural world.

This sacrifice of the natural component gives rise to the notion of a pure thinking subject, a disembodied mind placed outside materiality, an irreducible, autonomous and spiritual substance. This notion of the mental universe is not the source, but rather the consequence of the quantitative and mechanistic notion of body and matter.

The classical cognitive pattern and the significance ascribed to the notion of representation find here a crucial theoretical confirmation. One of the fundamental results of this conceptual framework is the so-called dismissal of the qualitative, along with the rejection of a certain epistemology, and, by and large, of the underlying anthropology, the main core of which can be traced back on one hand to the reduction of the living body to pure extension and movement (receptive surface and membrane interposed between inside and outside), and on the other hand to the notion of sensory experience as rough and formless matter, which needs a structure (or a form) in order to be organized, shaped and, hence, able to reasonably represent something.

That implies a notion of sensibility as pure passiveness, indifference, non-orientation, solitude and ineffability. Furthermore, it entails a notion of representation as empty structure, as transparent, pure and easily expressible form.

In this essay, I will take into account the dualism of *feeling subject* and *thinking subject*, and I will depict it as prior and founding, far more subtle and complex than the more renowned dualism of *res cogitans* and *res extensa*. Concurrently, I will endeavor to argue that we may find the first kind of dualism in the context of the Husserlian phenomenology. That kind of dualism gives rise to a broad ensemble of issues, which are all related to the classical cognitive pattern; first and foremost, the issue of *qualia*. This issue has been depicted as so *hard* that some scholars ended up conceiving it as absolutely unsolvable.

2 The Hard Problem of Matter

Whenever we employ the expression the “hard problem of consciousness” [20–27], we are referring to a problem of irreducibility: irreducibility of the qualitative, phenomenal features of a broadly constructed mental experience (expressible in

terms of first-person perspective) to its functional and cognitive features (which are, on the contrary, expressible in terms of a third-person perspective). The word ‘problem’ testifies to a certain refractoriness or, more precisely, the residuality of something that possesses some sort of priority and definitional status, namely the conceptual definition of the mental universe.

Let us consider the following problem: does a falling tree make noise, even though there is nobody around who can hear it? The prompt answer is oftentimes taken for granted: certainly the tree produced a sound, although there was nobody in the surroundings listening to it. It could not be otherwise. But everybody knows that this naive answer, although quite understandable if we adopt a natural attitude, can be replaced by a less naive answer, which is nonetheless as plausible as the first one: the fall of the tree emits sound waves that, departing from a source, radiate outwards like concentric circles in water. If the waves are intercepted by a human ear, they are processed as the sound of a fall. If the sound waves are not intercepted, the sound is not perceived. Therefore, the effective emission of sound by the falling tree depends on what we mean by ‘sound’. If we mean a heard noise, then the tree falls silently. On the contrary, if we mean “a distinctive spherical pattern of impact waves in the air, open to public inspection and measurement, given the right instruments” [28], then the falling tree emits a sound. While mentioning ‘sound’ in this second sense, we are referring to the *physical sound*; whereas, when speaking about ‘sound’ in the first sense, we are referring to *the experience of hearing a sound*. The latter has three components: (1) It depends essentially on the observer, namely it is reached by means of a private access [19]; (2) It essentially possesses a qualitative or phenomenal character (not just occasionally) [26]; (3) It is, in itself, not measurable. The behavioral responses to the sound experience can be measured, not the experience itself. Of course the hearing of the sound can be enhanced to include all the other kinds of experience: experience of colors, smells, tactile qualities and so on. All the problems that the philosophy of mind focuses on arise from these three components. Qualia are “those properties of mental states that type those states by what it is like to have them”, and so “correspond to mental state-type” [21].

They give rise to the so-called *hard problem* of the philosophy of the mind: the problem of *qualia*. That is to say, the problem of how subjective states, which are qualitative and essentially tied to the subjectivities and their response (and, therefore, distinct from *quanta*, which are measurable, quantifiable and expressible in the third person), could spring from something that is no longer qualitative in its own nature, but quantitative and material. The geography of *qualia*, as outlined above, is wide and complex. It involves tactile, visual and auditory properties, as well as taste and olfaction; experiences of heat and cold; affective sensations such as pain, pleasure and other bodily sensations (itches, tickles); mental imagery, the sense of self and so on. But all these states have the same common denominator: privileged access, qualitative character and non-measurability. The problem of *qualia* and the incompatibility between description in first and third person is founded on a crucial hypothesis which, in the context of epistemology, has the value of an auxiliary methodological hypothesis. On the one hand, we have the ‘external’ or ‘real’ world,

(sound waves, light radiations and so on) and the properties of its components (mass, shape, size, surface, motion) [29–31]. On the other hand, we have the ‘internal’ or ‘phenomenal’ world and its properties: touched objects, tasted flavors, heard sounds, seen colors and so on. In this light, we may assert that the problem of *qualia* perfectly resembles the traditional distinction between primary properties and secondary properties, between the way objects actually are and the way they are experienced. As Dennett puts it: “qualia is an unfamiliar term for something that could not be more familiar to each of us: the ways things seem to us. As is so often the case with philosophical jargon, it is easier to give examples than to give a definition of the term. Look at a glass of milk at sunset; the way it looks to you—the particular, personal, subjective visual quality of the glass of milk is the *quale* of your visual experience at the moment. The way the milk tastes to you then is another, gustatory *quale* and *how it sounds to you* as you swallow is an auditory *quale*; these various ‘properties of conscious experience’ are prime examples of *qualia*. Nothing, it seems, could you know more intimately than your own *qualia*” [32].

In spite of a widely held agreement, phenomenology itself formulates problems of residuality. These issues revolve around two different hard problems: the first one is that of transcendental ego, whereas the second one is that of matter. The latter provokes two distinct problems: the problem of *sensible matter* and that of *physical matter*. Lastly, we must consider that also the problem of sensible matter is a composite one, for it comprehends the problem of *sensorial hyle* (or the problem of *feeling*), and the problem of the *felt property*. When we talk about the problem of matter within the phenomenological tradition we then have three different concepts coming into play:

1. matter as material *hyle*, or material *content*
2. matter as felt *property*
3. inanimate matter (or physical matter)

The problem of matter, in its constitutive variety [33], is precisely the problem of *qualia* in philosophy of mind. It is the consequence of the fundamental distinction between what is prior and what is residual.

Let us start from the first problem, namely matter as material *hyle*. The problem of the sensorial *hyle* springs out of the distinction, clearly present in Husserl [34]: Fifth Investigation; [35], between intentional experience and feeling (the experience of feeling something). Mental experience is, according to Husserl, essentially if not exclusively, an intentional or cognitive experience [27, 36–42]. Intentional structure does not feature relational states of affairs—think, in this regard, of an asteroid falling on earth—nor directional yet non-intentional acts, such as the placing of a book on a table. Furthermore, that structure does not shape those experiences which are not directed towards anything, such as the pain caused by a fire or a panic attack. Intentionality is that property of the mind by means of which it is able to direct itself towards different objects, and this by virtue of its own structure and contents. It is precisely through that content that consciousness ‘departs’ from itself.

And it does this in a twofold way. On the one hand, directing itself towards its contents as in self-reflection, the mind considers itself as an object. On the other hand, directing itself towards objects which are not among its *Erlebnisse*, it directs itself towards something which is not actually contained in itself, namely the perceived object, or even the imagined object. In the latter case, the object is always given prospectively. Consciousness, with its intentional stance, is never a ‘look from nowhere’ [25], a bare and plain perception of the given object, but is always a perspectival look. As such, it is always incomplete. Conceiving intentionality as the conceptual core of the phenomenological inquiry implies the following aspects: (i) to focus the research primarily on the notion of *essence*; (ii) to individuate the essence of subjectivity in the notion of representation; (iii) to identify the essence of representation in the notion of determination. “Every act is either a representation or is grounded in a representation”: this is considered by Husserl, and Brentano before him, the indisputable core of every phenomenological analysis.

Nevertheless, intentionality and its representational stance do not exhaust the notion of experience. The answer to the question about whether all conscious states are intentional states is, according to Husserl and contrary to Brentano, a negative answer.

3 Res Cogitans, Res Extensa, Res Viva

The Husserlian distinction between intentional content (structured and representational) and non-intentional content (hyletic and qualitative) echoes the Cartesian distinction between *intellectual cogitationes* (thinking, judging, desire) and *sensible cogitationes* (feeling, imagination). Descartes, and Husserl along with him, conceive imagination and sensation as clearly distinct from those cogitations that, adopting a phenomenological terminology, we might define as purely intentional (such as intellect, will and judgment). Furthermore, according to both Descartes and Husserl, the sensible cogitations convey *something more*. This expression is fundamental, for sensibility and imagination crucially depend on something that is both not essential and distinct from myself. This *something more* is, according to Descartes, the body. There is no feeling without a feeling body. And, without feeling, the thinking substance would be mutilated, merely reduced to a function.

And, in doing so, I notice quite clearly that imagination requires a peculiar effort of mind which is not required for understanding: this additional effort of mind clearly shows the difference between imagination and pure understanding [*intellectionem puram*]. Besides, I consider that this power of imagining [*vis imaginandi*] which is in me, differing as it does from the power of understanding [*vis intelligendi*], is not required for my essence, that is, the essence of my mind. For if I lacked it, I should undoubtedly remain the same thing that I am now [*ille idem qui nunc sum*] (Descartes [], 2: 51).

Yet there is another irreducible entity beyond *res cogitans* and *res extensa*. We may call this entity *res viva*. In his account of the *res viva*, Descartes does not talk

about essence, but rather about *human nature*. This nature is not the disembodied dimension of pure thought, but rather an inextricable bundle of material and spiritual components: “Nature also teaches me, through these sensations [*sensus*] of pain, hunger, thirst, etc., that I am not merely present to my body as a sailor is present to a ship, but most closely [*arctissime*] (*joined*) to it, and as if intermingled [*permixtum*] with it, [*and on that account I with it compose one thing*]. For otherwise, when the body is hurt [*laeditur*], I, who am nothing other than a thinking thing, would not on that account sense pain, but would perceive this injury [*laesionem*] with the pure intellect, as a sailor perceives by sight whether something is broken in his boat; and when the body needs food or drink, I would expressly understand this thing itself, and I would not have the confused sensation [*sensus*] of hunger and thirst. For surely these sensations of thirst, hunger, pain and so on are nothing other than certain confused modes of cognition, arising from the union of, and the as it were intermingling of, the mind with the body” (Descartes [43], 2: 56).

After having established a distinction between material and spiritual substance, Descartes comes to realize that the distinction gives rise to a substantial difficulty. The living body, namely the animated and pulsating matter—which remains separated—is the privileged place of interaction between different ontological dimensions of matter. Descartes himself acknowledges a considerable anomaly in his theoretical framework: human nature, which is, at the same time, union and fusion of mind and body, a human nature that we must account for in order to explain the two fundamental cogitations, namely feeling and imagining.

What is a thinking substance? Descartes’ answer consists of a distinction between the formal, structural and functional dimension, on the one hand, and the material and hyletic dimension, on the other hand. The first dimension, which constitutes the very essence of the thinking substance, plays a definitory role; the merging of that formal feature with the material aspect corresponds to the nature of the thinking substance. The former (essence) is conceived as *disembodied*. The latter (nature) fully realizes itself only in its embodiment. The former keeps the distinction between immanence and transcendence, interior and exterior: the latter undermines such distinction. The former keeps the transparency of functionality, while the latter introduces considerable elements of opacity into the notion of subject. Both Descartes and Husserl strive towards the very same result: the individuation of a dimension of the cogito—or consciousness—which can always be objectively detached and be the subject of some sort of distant self-reflection. This possibility is grounded in the fact that this dimension does not have any traces of material existence. Descartes himself singles out quite lucidly the controlling function that reflective thought performs upon the more tacit one, in particular in the possibility of converting the feeling (the qualia, as we would call them) into *thinking of feeling*, or even *pretending to feel*.

As he says:

And finally it is the same I who sense, or who observes corporeal things as if through the senses. For example, I am now seeing light, hearing a noise, feeling heat [*colorem sentio*]. But I am asleep, so all this is false [*falsa*]. Yet I certainly seem to see, to hear, and I to

become warm [*calescere*]. This cannot be false [*falsum*]; and this is properly [*proprie*] what is called sensing in me [*quod in me sentire appellatur*]; and this, precisely so taken [*praeclise sic sumpum*], is nothing other than thinking (Descartes [43], 2: 19)

Since [*Cum*] I now know that even bodies are not strictly [*proprie*] perceived by the senses or the faculty of imagination but by the intellect alone [*solo intellectu*], and are not perceived from that they are touched or seen, but only from that they are understood [*intellegantur*], I clearly know [*aperte cognosco*] nothing more easily or evidently that can be perceived by me than my own mind (Descartes [43], 2: 22–23)

In conclusion, we may assert that feeling is, for Husserl as it was for Descartes, residual with respect to the intentional structure. If the phenomenological inquiry tends towards essence, it is clear that only the *structure* (we could even say the intentional architecture) can meet the requirements of this essentiality. Matter, understood in terms of material *hyle*, is the component which resists to the intentional *morphè*. In the context of this resistance, it limits the transparency and the representability of things.

4 Qualia and Plena

Let us take into account the second feature of phenomenological matter, namely matter as felt property, relative to the intended object. In this regard, the phenomenological counterpart of the term *quale*, or (the properties which are felt), is *plenum* (or *plena*) [45] Sects. 8 and 9. These are similar terms which, nevertheless, are the result of very different philosophical movements, so to speak. The term ‘qualia’ refers to everything which can be qualified. Traditionally, it corresponds to the so-called secondary properties which, unlike the primary ones, are subjective, dependent upon a particular situation and point of view, resistant to quantification and measurement. The phenomenological term ‘plena’ refers to the *filling* of the intuitive act which fills an empty act every time we say that we perceived something, imagined something, or even daydreamed something.

Plena are filling properties. Husserlian *plenum* is, however, similar to the *quale*, for a substantial undifferentiation characterizes both of them. There is clearly a descriptive difference between visual and musical *qualia*. It is a difference that, according to Husserl, can be reduced to different material, or better, regional, ontologies. For this reason, converting a scarlet red into a violin sound turns out to be impossible, whereas it is entirely possible to convert a scarlet red into a crimson one, or even an ocean blue. Evidently the point is not just avoiding confusion between qualitative differences: there are different regional boundaries that cannot be crossed qualitatively. However, according to Husserl, they share a common ground. And it is exactly this common ground that allows both phenomenologists and philosophers of mind to talk about sensible qualities, although with different aims. This common ground has, as far as I can see, two facets: on the one hand, both *plena* and *qualia* (*qualia* as opposite to *quanta*, *plena* as opposite to emptiness), thus underlying the priority of the structural, functional and quantifiable

dimension. On the other hand (and this second facet is related to the first one), both plena and qualia need something else to manifest themselves, and this something else is *extension*.

Each plenum, according to Husserl, fills an extension. Surely this is the case for colors (a color without extension is simply impossible, this being the most infamous example of material a priori). But it is also the case for sounds and tactile qualities. Both in phenomenology and philosophy of mind qualia are those properties that qualify an extension, this phenomenal aspect which emerges from an extension which is not sensibly qualified. It is a conception that we may call, once again, residual, for it depends crucially upon a substantive spatial conception. Furthermore even for Husserl, in the foundation relation existing between extension and plena and in its consequent constitution of an independent part, the latter acquires from extension that divisibility which they cannot have in themselves (it is impossible to divide 'the red'). This is testimony, once again, to the priority and the fundamental character of extension, just as quanta are prior to qualia in the philosophy of mind.

In more than one setting, Husserl refers to the intuitive properties as a veil which covers an extension, providing it with a certain qualification. According to Husserl, plena are fundamental (if there were no plena we would only have some sort of empty spectral phenomena) but they are not essential: only extension is truly essential. If the function and role of qualia is that of qualifying an extension, the function and role of plena is that of filling one. Without plena the phenomenon would be destined to lose its boundaries, its shape. Once again the notion of matter is conceived as residual with respect to a functional architecture or map, in this case the extension which the plenum fills. Matter, in this context (that is, when it is understood as a material plenum), is conceived as something more, something inessential that is added to what essentially constitutes the object: it is true that, without any plena, the object would be 'an empty something'; nevertheless, it is precisely that 'being an empty something' which defines it as an object.

5 Space and Time Metaphors

At this stage of our analysis, I would like to consider a final notion of matter, namely inanimate or physical matter. In this sense, materiality, despite its having spatial extension as an essential feature—as it was for Descartes—cannot be reduced to it. There are two essential components of materiality: duration and relational context. Duration is illustrated by Husserl as a relation between the temporal determination and a real feature which fills the duration and extends itself through it [44, 46]. In this sense, and only in this sense, each feature, when it comes to its content, is necessarily subject to change throughout its duration in an a priori way: things change when the temporal plena of their duration change either discretely or continuously. Whereas, when this condition does not occur, things stay the same.

The fact that the materiality of things depends upon the circumstances and the context in which they are placed cannot be disputed. If we consider a thing by itself, distinguishing between something and its phantom, i.e. its pale, empty and ghostly counterpart, becomes virtually impossible. The ghost of a certain thing has all the essential features that render that thing exactly what it is and nothing else: essential features that are dispersed throughout an extension. In this sense, we would see rainbows and blue skies but we could not define them as material things. On the other hand, if we consider the thing within a given context, the thing and the ghost of that thing cannot be regarded as the same element. Things exist, are real, substantial and causal (these terms are all synonyms) when they behave in a certain way. In this sense, real (or material) properties are, *ipso facto*, functional links: for example causal links. In order to get to know the reality of a given thing, we must be able to predict its behavior under a certain force, pressure, when it is smashed up, cooled down, heated up and so on. In the multiplicity of its dependence relations the real thing will retain its own identity. Therefore, inanimate or physical matter is once again, according to Husserl, a purely relational and functional concept; and, in this context, this aspect is even clearer.

The entire phenomenological analysis of consciousness and matter is pervaded and justified by an ensemble of *spatial metaphors*: the psychic life is described, indeed, as a *stream* or *field* of consciousness; Husserl refers to a pure *dimension* of immanence; the ontology of psychic experience is described (employing a geographical analogy) as a *region*; the notion of *stratum* turns out to be absolutely crucial; and, lastly, the notions of *perspective*, *adumbration* and *backcloth* (which are employed in this context) are all *spatial notions*. In this respect, the phenomenological notion of matter is not an exception: Husserl refers, indeed, to a *space* of understanding in relation to its contents, to a *space* of extension with regard to the intended object, and to the *space* of causal networks while considering physical matter. This space is filled each time by a material content: the material *hyle* in the case of the experience, the plenum in the case of the intended object, and the causal links for the physical matter.

It is exactly because of the spatial metaphor that the intuitive notion of matter collapses (through its own disembodiment and through its own taming, so to speak) into the notion of material thing. The material thing is reduced to its essential features, in their twofold facets of determinations and qualifications. Furthermore, the material thing is constituted by different layers: the layer of the material, inanimate thing is essentially distinct from the layer of the spiritual thing, mostly because of its fragmentability or divisibility—the latter being a disposition which matter acquires by means of spatial extension. Nevertheless, we must consider that matter is not entirely reducible to extension. On the contrary, matter is *something more* than its extension, something more than its being simply a thing.

A systematic account of this *something more* eludes Husserl. He does not get a clear and thorough grasp on the primary and pre-categorical character that characterizes our intuitive notion of matter; its resistance and independence. According to Husserl, matter remains (almost paradoxically) an unessential residual of the definition of material thing (extension on the one hand, function on the other hand).

In this sense, according to Husserl, Descartes and the contemporary philosophers of mind, matter actually turns out to be an actual problem, precisely because phenomenology does not capture the intuitive aspect of this notion, namely its being flesh and blood.

To sum up, the problem of matter underlines what we might call a *logic of residuum*, which involves a profound, paradigmatic distinction between primary and essential aspects (structure, function, form and so on) and secondary or inessential aspects (fullness, pre-cognitive, pre-categorical, embodiment, materiality, vagueness and so on). A possible solution to the problem of matter and to the problem of consciousness requires some sort of overturning, a paradigm shift, precisely as stated in Kuhn's framework [47, 48]. This shift reintroduces a material, tacit, unexpressed, but also temporal, active, integrated and intertwined dimension within the phenomenological perspective. This new paradigm is founded on a new metaphor that we might call a *temporal metaphor*.

6 Sensing, Flesh and Motion

The new approach mentioned above calls into question three crucial notions: the concept of sensing, the concept of flesh and, above all, the concept of motion. The first notion, that of sensation, replaces the original notion of consciousness. Sensation, in this context, is neither a *quale* nor an immanent content (*hyle*), but rather an integrated and intertwined unity of matter and spirit. As stated by Merleau-Ponty:

There are two ways of being mistaken about quality: one is to make it into an element of consciousness, when in fact it is an object for consciousness, to treat it as an incommunicable impression, whereas it always has a meaning; the other is to think that this meaning and this object, at the level of quality, are fully developed and determinate [49].

And again:

The pure quale would be given to us only if the world were a spectacle and one's own body a mechanism with which some impartial mind made itself acquainted. Sense experience, on the other hand, invests the quality with vital value, grasping it first in its meaning for us, for that heavy mass which is our body, whence it comes about that it always involves a reference to the body (Merleau-Ponty 46).

The notion of flesh replaces, here, the original notion of body. In phenomenology, the concept of body as *Körper* is tightly connected with the notion of extension whereas the concept of body as *Leib* is tightly connected with the notion of kinesthesia. Once again, and in both cases, we are dealing with a notion that underlines (contemplates, expresses and conveys) a formal, and functional aspect of body. On the contrary, the notion of flesh (*chair* in Merleau-Ponty) guarantees the presence of immanence and transcendence both in the stream of consciousness and in the matter. Several times Merleau-Ponty asserts that the notion of flesh is

an “ultimate notion”; a “concrete emblem of a general manner of being, which provides access both to subjective experience and objective existence” [50].

The phenomenon he focuses on is that of ‘touching one hand with the other hand’ (Merleau-Ponty 133–4). This phenomenon, he suggests, reveals to us the two dimensions of our ‘flesh’, namely that it is both a form of experience (tactile experience) and something that can be touched. It is both ‘touching’ and ‘tangible’.

Furthermore, the relationship is reversible: the hand that touches can be felt as touched, and vice versa, and according to Merleau-Ponty, this ‘reversibility’ is precisely what constitutes the essence of flesh. This component is crucial, for it shows the ambiguous status of our bodies as both subject and object. Husserl’s influence is evident here. Actually in *Ideas II* he states that “the Body as Body presents, like Janus, two faces” [33]. But Husserl considers these two faces of the body as *strata*. On the contrary, in the example of the handshake, the crisscrossing of touching and the tangible incorporate themselves into the same world: the two systems—Merleau-Ponty says, “are applied upon one another, as the two halves of an orange” and “we say therefore that our body is a being of two leaves”, “because the body belongs to the order of things as the word is universal flesh”. By and large, Merleau-Ponty transforms the *correlative analysis* (typical of the Husserlian phenomenology, in which the structure of consciousness is the basic element) into a *bilateral analysis* according to which both the subjective and objective poles require a foundational priority. Accordingly, he extends the methodological approach from a perspective that privileges the *external frame* of the experience and its sensory fulfilment to a perspective that privileges the *actual content* and its interlacing with the material body.

This bilateral perspective aims at overcoming the distinction between intentional (or representational) structure and sensible matter and, more generally, the epistemological model based on a face-to-face pattern: mind-body, spirit-matter, outer-inner, active-passive, organism- environment and so on. Merleau-Ponty’s proposal takes the shape of an *intertwined paradigm*, namely circular and reversible. Within this paradigm sensibility functions as an intersection between form (mind) and matter (body), whereas the notion of flesh aims at rejecting the distinction between extension (essence) and *plena* (accident). In the first case, the weakened notion is that of representation, in the second case that of represented object. In both cases Merleau-Ponty’s paradigm undermines the very core of the representational pattern, namely the absolute centrality of the notion of determination. In this respect, Heidegger writes:

The question asks about being. What does being mean? Formally, the answer is: Being means this and this. The question seeks an answer which determines something which is somehow already given in the very questioning. The question is what I called a *question of definition*. It does not ask whether there is anything like being at all, but rather what is meant by it, what is understood under it, under “being”. When we thus ask about the sense of being, then being, which is to be determined, is in a certain way already understood. In a certain way: here this means according to a *wholly indeterminate pre-understanding*, an indeterminacy whose character can however be phenomenologically grasped. [51].

Overcoming the determinative (or attributive) conception, in favor of plasticity and notions such as reversibility, environmentality, pre-categoriality, implies that the foundation of the mental is not to be sought in the notion of representation, but rather in that of motion and, therefore, of time.

Merleau-Ponty's perspective about matter does not disclose the priority of structure (structure of the representation, structure of extension, structure of relations) but rather the priority of motion, which is indivisible in itself. The operation of building movement out of immobility is completely justified when it comes to action, but is rather misleading from a theoretical perspective. The radical overturning we just mentioned consists in emphasizing the component that, so far, had been regarded as residual: *hyle*, namely the plenum, the impact, so to speak, of matter. We might say, quoting Gibson [10], that the objects of the physical world are not sets of properties but a cluster of affordances, opportunities, motions. Nevertheless the concept of motion is not conceived as *displacement*, as movement from one place to another, but as moving *process* [7].

This shifts the focus of the philosophical analysis to the notion of duration (a temporal metaphor rather than a spatial one) and, along with that, to notions such as difference, embodiment, context. All these notions hint at the abandonment of the distinction between form and content, interior and exterior, inside and outside in favor of their integration and fusion. The result is the rejection of a dualistic paradigm, and the adoption of an interactive model, which in turn leads to an alternative conception of matter.

In conclusion, we may assert that the classical representational and cognitive pattern (but also the classical phenomenological pattern) gives rise to a problem concerning the qualitative dimension. This problem is essentially related to the notion of matter, conceived as residual with respect to the notion of form: the sensorial *hyle* is residual with respect to the intentional form; *plena* are residual with respect to extension, and physical matter (its resistance, its non-undifferentiation, its endurance) is also residual with respect to the broad ensemble of connections in which the physical thing is inscribed. The residual component which characterizes the notion of matter is simply the other side of the absolute predominance of form (*representational form* in the specific context of mental phenomena). This predominance necessarily gives rise to a problem (both in the context of phenomenology and in philosophy of mind): the problem of the ontological status of the qualitative states.

This issue is a crucial one and, in order to be solved, requires a radical change of perspective. In the context of phenomenology this change takes the shape of specific notions, such as enactive, embodied and situated mind [12–14, 52–54].

In conclusion: conceiving the concept of matter in this way requires the adoption of a paradigm that is no longer spatial but temporal [55–57]. And it is certainly not by chance that, in the course of his reflections on nature during his final years, Merleau-Ponty and Séglaard [58] turned with renewed attention to the scientific revolutions concerning the concept of time in physics and, above all, in contemporary biology. In biological time the primacy accorded to impressional consciousness (and in consequence, to the notions of *datum*, fixity, immobility, arrest)

is replaced by the primacy accorded to that “*masse intérieurement travaillée*” offered by the flesh (and in consequence, to notions of tendency, movement, duration). All these notions imply a temporal paradigm (and not a spatial one); they allude to a dynamic, non-static pattern, to a paradigm that, instead of being projective (as in the representational model), is *agentive* and, ultimately, evolutive.

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