Representative for contemporary attempts to establish a science of consciousness we examine Chalmers’ statement and resolution of the “hard problem”. Agreeing with him that in order to account for subjectivity it is necessary to expand the ontology of the natural sciences, we argue that it is not sufficient to just add conscious experience to the list of fundamental features of the world. Instead, we turn to phenomenology as the philosophy of conscious experience and give an outline of Merleau-Ponty’s critique of the objectivist ontology underlying science which excludes subjectivity from the world. We reconstruct his proposal for a revised ontology in *The Visible and the Invisible* aiming at an extended understanding of Being including subjectivity, which takes on the form of a constellation of new ontological terms centered around the concept of the “flesh of the world”. In trying to spell out the consequences of Merleau-Ponty’s ontological considerations for scientific practice and especially the science of consciousness, we notice that his philosophy of subjectivity-in-the-world on its part is unable to connect to the insights of the natural sciences. The phenomenological critique of the “hard problem” reveals a deeper disparity, which at present limits its practical implications.
Introduction

In the last decade, the study of consciousness has established itself as a new line of scientific research. Even though philosophers were concerned with the topic for centuries and it was still present in the beginnings of scientific psychology, after the advent of behaviorism for a long period consciousness was seen not to be a proper subject matter of scientific inquiry. This attitude changed only toward the end of the 1980s. Since then a significant amount of work has been devoted by philosophers, psychologists, and cognitive scientists to establish the grounds for the investigation of consciousness (cf. Van Gulick 2007). One manifestation of these efforts is the continuing series of conferences aimed “toward a science of consciousness”.

This development was fostered by an influential paper of Chalmers (1995). The author distinguishes between what he calls the “easy problems of consciousness” and the “hard problem of consciousness”. The former are concerned with the explanation of certain phenomena commonly associated with consciousness, for instance the discrimination of stimuli, the integration of information, attentional states, and the deliberate control of behavior. Chalmers calls these the easy problems, because even though our current understanding of these phenomena may be deficient in many ways, for all of them an analysis via standard scientific procedures and an explanation in terms of structural and functional properties of the organism is clearly conceivable. The “hard” problem, on the other hand, is about something that seems to evade these procedures: conscious experience. It is concerned with the “something it is like to be” a conscious organism, with the nature of the qualities that are present in experience, with the question how it can be understood that the mechanisms underlying conscious functioning not only fulfill these functions, but also seem to give rise to a “rich inner life” of the organism (p. 201). Set into more traditional philosophical terms, the easy problems are about the objective properties of consciousness, or rather of organisms deemed to be endowed with it, while the hard problem aims at the subjective aspect of consciousness; it is about consciousness as subjectivity.

After examining several prominent attempts to address the problem of consciousness and demonstrating that none of them solve the hard problem, Chalmers gives an account of his own solution. In his opinion, it is not possible to explain consciousness “on the cheap”, i.e. using only what
is already at hand, but such an explanation requires an “extra ingredient”. He states that conscious experience cannot be reduced to the features of the world as they are known to science, but that it is necessary to expand the ontology. Chalmers proposes to do so by taking experience itself as fundamental. More precisely, he proposes to consider experience “as a fundamental feature of the world, alongside mass, charge, and space-time” (p. 210). Later he goes on to speculate that it might be “information” that “has two basic aspects, a physical aspect and a phenomenal aspect” (p. 216), binding together the fundamental features of the physical and the experiential.

This must strike the reader as an astonishing resolution. After Chalmers went to great lengths to dissect the problem of consciousness and to expose the hard problem as the problem of experience, of subjectivity: as a problem that is hard exactly because it can not be tackled in terms of objective properties—after all this Chalmers declares experience to be just another objective property.

Apparently conscious experience has to be taken as fundamental in a different way—not just as an extra ingredient to the world of objects, but rather as a starting point in itself. In the following we are trying to tie up to that line of thought in philosophy whose agenda is the detailed description of experience, the tradition of phenomenology founded by Husserl. However, exactly because phenomenological philosophy takes conscious experience as fundamental, for it the natural sciences easily appear as subordinate disciplines. While naturalistic thinking cannot help but to conceive of everything in terms of objects and properties, the engagement with phenomena suggests to dismiss the sciences as irrelevant for understanding the subject.

Within the tradition of phenomenology, Maurice Merleau-Ponty holds a special position because he tried to escape this opposition. By re-working the analyses of pure phenomenology to overcome the centering on the subject and by extensively relating phenomenological description to the observations of scientific psychology, he worked to establish a more proliferous middle ground. According to Waldenfels (1983), Merleau-Ponty started to develop his own form of phenomenology in his early work *The Structure of Behavior* (*La structure du comportement*, 1938) out of the confrontation with behaviorism and Gestalt psychology, utilizing the concepts of structure and Gestalt to revise Husserl’s notion of phenomenon. His initial treatment of consciousness as just one of many structures, however, changed into its interpretation as a universal ambience, a position which was continued and elaborated upon in the *Phenomenology of Perception* (*Phénoménologie de la perception*, 1945). Here the purity of consciousness was significantly attenuated in comparison to early phenomenology, but in the form of a perceptive
consciousness it again received a constitutive role. Alongside, the more radical structure-oriented approach of the previous work was still present.

This latter tendency prevailed again in his last work, The Visible and the Invisible (Le visible et l'invisible, 1964), which exists only as a manuscript because Merleau-Ponty died in 1961 while working on the book. Here he made another effort to overcome the opposition of consciousness (subjectivity) and world, of phenomenological analysis and scientific research. This endeavour—to study conscious experience without either making it an objective property or separating it completely from the world of objects—Merleau-Ponty conceives as a revision of ontology. In the following we are going to reconstruct Merleau-Ponty’s understanding of ontology and to explicate the concepts he introduces to achieve that goal.¹

Merleau-Ponty’s understanding of ontology

Ontology etymologically means teachings on Being; it is traditionally considered as a branch of metaphysics. But Merleau-Ponty’s ontological considerations start from a rejection of the classical metaphysical conception of Being² as an in-itself, a totality of beings in space and time that lies open before the philosophical view, which itself is not located within—a “Great Object”, being scrutinized by the subject acting as a “cosmic observer”. Merleau-Ponty describes this ontology not very extensively and not in terms of the history of philosophy, but in the context of his critique of science. Here the main charge is that science adopts and radicalizes objectivist ontology, even though its own results speak against it. Its effect is that “the world will close in over itself, and, except for what within us thinks and builds science, that impartial spectator that inhabits us, we will have become parts or moments of the Great Object.” (15)³ The main fault of ontology therefore is that it strictly separates the physical and the mental and opposes them in the form of an abstract subject and object. Fatal consequences of this approach are that the world is completely reduced to being

¹ There seems to be an increasing awareness of the relevance of Merleau-Ponty’s work in consciousness studies and related fields; see Boyle (2008) and Freeman (2007) for two recent examples. However, most of these references pertain only to the Phenomenology of Perception, while the interesting considerations of The Visible and the Invisible are seldomly taken into account.

² We use the form ‘Being’ for the ontological term to make it easily discernible from ‘being’ meaning something particular.

³ In the following, numbers in parentheses refer to the page numbers of Merleau-Ponty (1969). The reader should be aware of the fact that many of the quotations are taken from Merleau-Ponty’s working notes, resulting in peculiarities and inconsistencies in capitalization and punctuation, extensive emphasis, and use of German terms.
object, and that it is conceived as a whole to be overviewable and comprehensible.

By contrast, Merleau-Ponty’s efforts might be characterized as an attempt at a non-metaphysical, phenomenologically informed and motivated form of ontology. To clarify his approach, it is necessary to find out in which sense one can speak of Being after that quasi-godlike perspective has been abandoned, or, what kind of issues Merleau-Ponty has in mind when he is talking about Being. The Visible and the Invisible features several more or less distinct variants of Being. The basic meaning seems to be quite classically Being as existence, as a pure “there is”, a something that faces us as an object of perception or thought, the for the moment unresolved rest. But in contrast to tradition this existence is not conceived as an in-itself purely confronting the subject, but as something underlying, forerunning the epistemological difference of subject and object, something that is not subjected to that difference, but forms a unity and basis from which this difference itself develops, i.e. as a realm of fundamental relations. Only derived from this is the meaning of Being as something undisposable, that evades the dressing by the subject, that is not subdued to its categories and cannot be captured by operational science; that which is not subjectively constituted. Via the scope within which that “there is” appears, furthermore Being gains the meaning of a medium, element, or dimension of beings, which can only be realized through a specific being that obtains an ontological function, in particular the human body. From this results a variety of forms or representations of Being, each of which establishes a concrete ontology. Finally, an especially important form of Being as medium is given by the space (and the time) in which a human being settles down and locates itself, a general framework of its situatedness.

Merleau-Ponty describes “getting into contact with being as pure there is” as follows: “One witnesses that event by which there is something. Something rather than nothing and this rather than something else. One therefore witnesses the advent of the positive: this rather than something else.” (206) From this description one can already tell that the pure “there is” can hardly come into focus without being differentiated from something else. Pure existence can only be considered in retrospect, as a unity from which a process of differentiation starts. Within fully developed perception it appears as a “perpetual residue” (211): “To see is precisely, in spite of the infinite analysis always possible, and although no Etwas [something]4 ever remains in our hands, to have an Etwas.” (217) Though that unity can only be

---

4 The reason Merleau-Ponty here uses the German word “etwas” might be that (in contrast to English “something” or French “quelque chose” but similar to Spanish “algo”) it makes it possible to refer to something without implicitly declaring it to be a thing.
conceived of negatively, Merleau-Ponty tries to turn it critically against the subject/object-situation of classical epistemology. Ontology is therefore defined in a negative way; it “would be the elaboration of the notions that have to replace that of transcendental subjectivity, those of subject, object, meaning […].” (167) Merleau-Ponty’s interest is directed at that which eludes these clear demarcation lines: “the subject–object question / the question of inter-subjectivity / the question of Nature” determine his “ontological questioning” (165).

Merleau-Ponty’s positive term for “the common tissue of which we are made” is “the wild Being” (203); it is wild because it lacks the positivity, firmness, and definiteness of a thing, because it does not submit to the differentiations imposed upon it, especially the difference of subject and object. Starting from this wild Being, the inconsistencies arising from the confrontation of in-itself and for-itself can be elucidated. For instance, the scientifically observed functional dependency of consciousness on processes of the body is to be considered as “a way of expressing and noting an event of the order of brute or wild Being which, ontologically, is primary” (200); consciousness and body are just abstractions cut out of the unity of Being. Put under the perspective of the difference of subject and object this primacy of an original unity of Being turns into a primacy of the object, into an interest in that which is beyond subject, language, and science and that defies their orderly arrangements, an interest in “the unmotivated upsurge of brute Being” (211). Merleau-Ponty’s philosophy “asks of our experience of the world what the world is before it is a thing one speaks of and which is taken for granted, before it has been reduced to a set of manageable, disposable significations” (102); it is to be regarded “not as the search for an invariant of language, for a lexical essence, but as the search for an invariant of silence, for the structure” (260).

But if Being is supposed to appear it needs a medium, especially the sensible, which “is Being’s unique way of manifesting itself without ceasing to be ambiguous and transcendent.” (214) The ontological task to disclose Being is taken on within the sensible by something particular, “for example, a color, yellow; it surpasses itself of itself: as soon as it becomes the color of the illumination […] it ceases to be such or such a color, it has therefore of itself an ontological function” (217). A specific being, a sensory quality, a factual context extends into a general ground, and by eluding the status of an object it gains the capacity to represent the unity of Being, to become a dimension in which everything has its place. Even more, Merleau-Ponty considers this to be the only form in which Being is accessible: “One cannot make a direct ontology. My ‘indirect’ method (being in the beings) is alone conformed with being—” (179). To insert the particular in place of the gen-
eral in this manner is possible first of all “because each part is torn up from
the whole, comes with its roots, encroaches upon the whole, transgresses
the frontiers of the others” (218), that is, because it still bears the marks of
the antecedent unity. A prerequisite for that is a lack of positivity, the thing
must not be completely with itself, it has to point beyond. For instance, it is
the “negativity that inhabits the touch” which brings about “that the body
is not an empirical fact, that is has an ontological signification” (255). Be-
cause in principle every being can obtain such an ontological function, one
can distinguish a multitude of concrete ontologies; an example that Mer-
leau-Ponty elaborates to some extent is that of an ontological psychoanalysis
(cf. 268). In this context Being refers to the dimension that is disclosed by
some being in its ontological role; of fundamental importance here are the
dimensions of time and space (cf. 121). At this point Being finally signifies
the farthest range within which we establish ourselves and find our place.

Ontological terms and concepts

After this outline of the subject matter of Merleau-Ponty’s ontology we are
now going to present in greater detail the factual theses it is composed of.
But his views in The Visible and the Invisible do not have the form of a closed
docctrine that could simply be reproduced; rather, it has to be reconstructed
from the text. To this end, we are following the conception of ontology cited
above as an elaboration of the terms that should replace the terminology of
classical ontology and epistemology.

The background of Merleau-Ponty’s formation of concepts is given by
the notion of wild Being as a fundamental unity, relative to which the dif-
ference of subject and object has to be considered as something subordi-
nate. The wild Being described by ontology is not an object opposed to the
subject, but it includes the latter within itself. The idea is that “of a world
seen within inherence in this world, by virtue of it, of an Intra ontology,
of a Being encompassing–encompassed.” (227) In the context of this intra-
ontology that does not exclude the subject from Being, it is necessary to
try to understand the alterity of the mental from wild Being itself. Mer-
leau-Ponty continues: “what replaces the antagonistic and solitary reflective
movement”—the subject—“is the fold or hollow of Being having by prin-
ciple an outside, the architectonics of the configurations.” (227) Conscious-
ness, which poses a difference between itself and the rest of the world, is
to be understood as a segregation, a deviation within this world; as a place

5 This metaphor is probably modeled after the hollow of the eyeball or that of the skull
enclosing the brain, or the folding of the germ sheets during the process of ontogeny which
held much interest to Merleau-Ponty.
where the smooth tissue of the world is deformed into a cavity within which events achieve a certain amount of autonomy, and where impressions from the outside can be repeatedly reflected and transformed.

But this perspective presupposes that there is negativity in the world, that it is not possible to cleanly separate the positivity of Being and the negativity of thought. Against a strict opposition of Being and Nothingness Merleau-Ponty brings the phenomenological concept of horizon into play, within which the two are mediated:

“In short: nothingness (or rather non being) is hollow and not hole. The open, in the sense of a hole, that is Sartre, is Bergson, is negativism or ultra positivism (Bergson)—indiscernible. There is no nichtiges Nichts [null nothingness]. […] The true solution: Offenheit of the Umwelt, Horizonthaftigkeit [openness of the environment, horizontality].” (196)

A horizon connects the positivity of that which is given to the negativity of that which is only just referred to. It is the form by which Being carries the negative in itself, which can then oppose it as a hollow—as consciousness, mind, subject. Only via this connection with the positivity of Being does the negative gain the efficacy without which it would just impotently oppose the world. Absence, or non-being, is present within the world.

“The negative here is not a positive that is elsewhere (a transcendent)— —It is a true negative, i.e. an Unverborgenheit of the Verborgenheit [unconcealedness of the concealedness], an Urpräsentation of the Nichtpräsentierbar [primal presentation of the not-primally-presentable], in other words, an original of the elsewhere, a Selbst [self] that is an Other, a Hollow” (254).

The concept of intra-ontology is therefore not only an indication of the position from which Merleau-Ponty conducts ontology, but it is also a more precise specification of the notion of wild Being. The idea of a unity devoid of discrimination is replaced by that of a multitude of mediations and possible differences, amongst which the difference of subject and object unwarrantedly claims primacy.

The introduction of horizon as a connection of negativity and positivity induces a far-reaching modification of the concept of presence in general, and to an abandonment of the ideal of immediate presence in its two complementary forms: “Whether one installs oneself at the level of statements, which are the proper order of the essences, or in the silence of the things […]—the ignorance of the problem of speech is here the ignoring of all mediation.” The na"ive view that, via perception, believes to be in immedi-

6 Merleau-Ponty uses the adjective ‘horizontal’ and related terms with the meaning ‘being structured in horizons’ or ‘in terms of horizons’.
7 Here the phenomenological concept of horizon meets the dialectical notion of mediation, which Merleau-Ponty adopted from Hegel.
ate possession of the things, such that it is only the concepts or the language that removes them into distance, as well as skepticism which holds that there is no path that leads out of the immanence of consciousness, language, or culture—both of these positions share the ideal of coincidence as their criterion for the relation to the world, no matter whether it is taken for granted or considered impossible.

"On both sides one wants something—internal adequation of the idea or self-identity of the thing—to come stop up the look, and one excludes or subordinates the thought of the far-offs, the horizontal thought. That every being presents itself at a distance, which does not prevent us from knowing it, which is on the contrary the guarantee for knowing it; this is what is not considered." (127)

Against the ideal of coincidence Merleau-Ponty sets the concept of Being at a distance, of presence by mediation. Such a distance does not restrict knowledge, contact; rather, knowledge in itself is always someone’s knowledge of something, that is, it has a twofold structure that would only be destroyed by a coincidence of knower and known.

"Just as we do not speak for the sake of speaking but speak to someone of something or of someone, […] so also the lexical signification and even the pure significations […] aim at a universe of brute being and of coexistence, to which we were already thrown when we spoke and thought, and which, for its part, by principle does not admit the procedure of objectifying or reflective approximation, since it is at a distance, by way of horizon, latent or dissimulated." (101)

That distance can possibly be varied—but it cannot be removed. According to Merleau-Ponty this is not due to a specific approach, but it belongs in a fundamental way to the universe of brute Being; staying at a distance and horizontality inheres in Being itself.

In this understanding, distance acquires a meaning that goes beyond that of a form of knowledge. Merleau-Ponty describes it using the notion of transcendence: “To say that there is transcendence, being at a distance, is to say that being […] is thus inflated with non-being or with the possible, that it is not only what it is.” (181) This concept characterizes Being’s mode of being; it is not to be conceived as something that is purely opposed to non-being, but which in a way carries the distance within it, as a non-coincidence, non-identity with itself. At this point the interpretations of consciousness as a deviation from Being and of knowledge as distance meet in the integrating concept of transcendence. This assimilation of the relation between knower and known and of relations within Being itself is reinforced by another of Merleau-Ponty’s views, namely that a being that has absorbed non-being constitutes a deviation that at least points into the general direction of con-
The flesh of the world

In this composition of terms another notion has been introduced, that of the flesh. It is a novel term, and more so than the other terms of Merleau-Ponty's ontology, because it is not a traditional concept that is picked up and transformed. A new idea is being implemented that needs to be designated by a correspondingly unusual word. "What we are calling flesh [...] has no name in any philosophy." (147) Initially it can only be defined in a negative way, contrasting it to traditional philosophical concepts that have a similar meaning, but that imply an emphasis that renders them unsuitable for Merleau-Ponty's purposes.

"The flesh is not matter, is not mind, is not substance. To designate it, we should need the old term 'element,' [...] in the sense of a general thing, midway between the spatio-temporal individual and the idea, a sort of incarnate principle [...]. The flesh is in this sense an 'element' of Being." (139) The concept of flesh does not submit to the classical oppositions, but denotes the space or dimension within which these oppositions have their relative rights.

Flesh as a metaphor derives in the first place from the central position of the human body as the articulation point where consciousness is embedded into Being. But in contrast to the body which is always someone's body, different from the materiality of things, the flesh is meant to be something less human, closer to the objective side. It is the centering on the subjective

8 The notion of a lateral or sideways entry seems to be a medical metaphor. It describes the surgeon's approach to the body, probably in contrast to that of the anatomist: "Perception opens the world to me as the surgeon opens a body, catching sight, through the window he has contrived, of the organs in full functioning, taken in their activity, seen sideways." (218) The anatomist separates the organs in dissection and lays them out so that he can overlook them like God overlooks Being in itself. In contrast, the surgeon restricts himself to a certain perspective, relative to which the flesh maintains its depth, and severs the tissue only to the extent necessary to gain any insight at all; he creates a hollow.
that is to be overcome, even in the form of the human body. “When we speak of the flesh of the visible, we do not mean to do anthropology, to describe a world covered over with all our own projections, leaving aside what it can be under the human mask.” (136) In this vein the concept of flesh takes on the specific form of the flesh of the world:

“The flesh = this fact that my body is active–passive (visible–seeing), mass in itself and gesture— / The flesh of the world = its Horizonthaftigkeit (interior and exterior horizon) surrounding the thin pellicle of the strict visible between these two horizons” (271).

Here it becomes apparent why it makes sense to put transcendence and flesh together: The notion of flesh serves to elaborate the ontological concept of Being at a distance.

From this arises an interpretation of the metaphor that is no longer bound to the body. Flesh denotes neither the human corporeity nor the materiality of things, but that which is between the human beings and the things, that empty space which is not empty but filled with looks and touches.

“Between the alleged colors [sense data] and visibles [things], we would find anew the tissue that lines them, sustains them, nourishes them, and which for its part is not a thing, but a possibility, a latency, and a flesh of things.” (132 f.)

The flesh is the tissue of the world itself, it forms the “connective tissue of exterior and interior horizons” (131 insertion). In this account the metaphor of flesh might be supplemented by ‘bones’ and ‘skin’ to denote that whose interspace it fills. The flesh stands for exactly that mediation that was called for in criticizing the ideal of coincidence:

“It is that the thickness of flesh between the seer and the thing is constitutive for the thing of its visibility as for the seer of his corporeity; it is not an obstacle between them, it is their means of communication.” (135)

The flesh is the flesh of the world in the strict sense in which the world is not a collection of things but the entirety of inner and outer horizons. Visibility and corporeity are derived from it by an attribution of the mediation (the thickness of the flesh) to one of the sides. The flesh of the world lays itself around the things and the human beings and in this way constitutes their materiality. There is “something to which we could not be closer than by palpitating it with our look, things we could not dream of seeing ‘all naked’ because the gaze itself envelops them, clothes them with its own flesh.” (131)

Seeing is not something that belongs to consciousness and is inserted into Being from the outside. Instead, perception rests upon the mode-of-being of Being itself, which therefore is not to be modeled on the thing, but to be conceived as mediation:

“The flesh of the world is of the Being-seen, i.e. is a Being that is eminently percipi, and it is by it that we can understand the percipere”; it “is finally
possible and means something only because there is Being, not Being in itself, identical to itself, in the night, but the Being that also contains its negation, its percipi”. (250 f.)

Thus Merleau-Ponty’s ontology approaches the central idea that the multitude of perspectives onto Being belongs to that Being, even more: that it is made up of them. In his opinion, “what merits the name of being [is] not the horizon of ‘pure’ being but the system of perspectives that open into it”, that “the integral being [is] not before me, but at the intersection of my views and at the intersection of my views with those of the others, at the intersection of my acts and at the intersection of my acts with those of the others […]” (84). In opposition to the classical ontology of the in-itself Merleau-Ponty insists on the irreducibility of perspectives, of mediation, and of the situatedness of the subject; but he does not turn this against the concept of Being and ontology in general but arrives at the idea of an ontology of perspectives. From the inescapable dependence of any access to Being from mediating perception Merleau-Ponty does not draw the skepticistic and relativistic consequence that there could be no knowledge of something that is not just an explication of one’s own point of view. The subject matter of his considerations is not a particular perspective or a certain manifold of them, but the system of perspectives that constitute an individual being, which alongside with my views and those of other people also includes its relations to other things as well as forms of contact that are just possible.

“As for being, I can no longer define it as a hard core of positivity under the negative properties that would come to it from my vision: if one subtracts them all there no longer remains anything to see; and nothing permits me to attribute them to the For Itself, which moreover is itself sunken into Being. The negations, the perspective deformations, the possibilities, which I have learned to consider as extrinsic denominations, I must now reintegrate into Being […].” (76 f.)

But if one has gone so far as to consider the perspectives onto something as belonging to it in an essential way, then it is only consequential to abandon altogether the concept of a ‘thing itself’ in addition to and apart from its system of perspectives; a thing is to be conceived as that very conjunction of views:

“One goes one step further in suppressing the model In itself: there is no longer anything but representations on different scales [in different perspectives]. […] —It is a question of understanding that the ‘views’ at different scales are not projections upon corporeities—screens of an inaccessible In itself, that they and their lateral implication in one another are the reality, exactly: that the reality is their common inner framework (membrane), their nucleus, and not something behind them: behind them, there are only other ‘views’ [inner
horizon] still conceived according to the in itself–projection schema. The real is between them, this side of them.” (226)

The Being of something is therefore to be taken as the common framework of its presentations, its appearances. Relative to this, the paradigm of an invariant underlying thing can only be an approximation, a short representation of such a framework which is only useful in special cases. The object of perception and knowledge is thereby not abolished, but framed differently; not as an in-itself, but as a condensation in the contiguity of views.

A new science?

The main goal of Merleau-Ponty’s ontological efforts as they have been reconstructed in the preceding sections is to re-locate the subject into the world. In this view, ‘the subject’ is an overly concentrated and purified version of traits that belong to the world in general, which by withdrawing them from it has been transformed into a collection of pure objects, things. The aim is to revise this separation and thereby restore a continuity between consciousness and the world of objects it finds itself in. Merleau-Ponty establishes this position not so much in the form of argumentation, but via a close phenomenological examination of the situation a conscious human being actually finds itself in—as opposed to the theoretical preconceptions about it, ideas which were built up over centuries of philosophy and science and which have already worked their way into our modes of thinking and perceiving. Because the separation of subject and object belongs to a certain conception about the basic structure of Being that he calls the ontology of the Great Object, a revision of that separation implies a modification of the ontology which Merleau-Ponty characterizes as a reintegration into Being of those features that traditionally were kept within the subject: horizontality, negativity, mediation, perspectivity, non-identity. This strong ontological streak of Merleau-Ponty’s thought in The Visible and the Invisible which responds to what is commonly called the psychophysical problem, is complemented by and closely intertwined with a stance on the aptitude of consciousness to connect to the world, i.e. the epistemological problem of the nature of knowledge.

Against this background, it is evident what befell Chalmers’ attempt to take conscious experience as fundamental. Even though in tackling the “hard problem” he in a sense tried to find subjectivity in the world, he did so naturally on the basis of the standard ontology of science. In this view objects are things made of one or several types of basic material (substances) that have certain properties and that may be engaged in processes generating more complex phenomena. Chalmers argued that conscious experience
cannot be among these because it is not conceivable how a physical mechanism should give rise to an “inner life”. Trying under these conditions to make consciousness an object of science necessarily means to conceive of it as a new type of object, being made from another basic stuff, the “extra ingredient”. The problem is just that if the traits of subjectivity have been completely removed from the world of objects, a new substance cannot account for it either. So, even though Chalmers is correct in arguing that in order to include conscious experience it is necessary to “expand the ontology”, this involves much more than introducing a new type or property of objects—it means conceiving an extended meaning of being.

But this observation and critique, which could be similarly applied to other attempts at “explaining consciousness”, remains in the realm of philosophy. Accepting Merleau-Ponty’s view, the question poses itself how far and in which way it is possible to translate his insights into a revised effort towards a science of consciousness.

The most elementary approach to locating consciousness in the world is to investigate features associated with it within the world, and that means here: within the object domains of the natural sciences. A large amount of work on this note is already being done; it constitutes the cognitive sciences. Over and above that, one can find specific affinities between Merleau-Ponty’s descriptions of the way consciousness is embedded in the world and certain scientific approaches—affinities which are partially due to Merleau-Ponty’s own reception of ideas from the sciences, which he formed into metaphors as well as into phenomenologically enriched versions of these concepts. For instance, when Merleau-Ponty interprets consciousness as a hollow of Being, as something which closes against an environment, this is clearly inspired by the biological description of the structure and genesis of organisms; and it resounds again in later theoretical advances like Maturana and Varela’s characterization of living beings as organizationally closed (autopoietic) systems and their insistence that this basic organization itself already implies cognition (Maturana and Varela 1980). Similarly, Merleau-Ponty’s emphasis on the perspectival structure of Being communicates with von Foerster’s idea of a “second order cybernetics”, a discipline focusing on the investigation (and that is, observation) of observing systems (von Foerster 1984).9

All of this concerns work that is to some extent already going on, or at least ideas that are present in the discussion. Without doubt these kinds of

9 It might be said that science in the form of systems theory and phenomenology in the form of the ontology of the flesh try to work their way towards each other. However, since they proceed on different levels—the object domains of the sciences vs the phenomenal structure of experience—there seems to be no chance for them to ever actually meet.
modern scientific developments can be helpful; they contribute to the re-
finement of concepts and descriptions and increase the awareness for prob-
lems that arise in the scientific investigation of consciousness. Such a posi-
tive evaluation might also be underlined by the fact that some of these ap-
proaches can be seen as current forms of scientific projects Merleau-Ponty
sympathized with in his own time, particularly Gestalt psychology.

Still, it is hard to see how this research would ever be able to arrive
at something that adequately accounts for lived human experience. Even
though in the program of describing and analyzing objective properties the
cognitive sciences undoubtedly capture important aspects of subjectivity in
the world, they still operate on the grounds of classic objectivist science
and its implicit ontology of the Great Object. Shifting the focus from states
to processes, from passive aggregates of matter to self-organizing systems
eq surely helps; it constitutes a departure from the thing-with-properties
paradigm and can with Merleau-Ponty be seen as an effort “to find an
operational, scientific expression of what is not the being-object, the in-
itself” (207)—but does this kind of scientific reconceptualization already
reach into the realm of subjectivity? Probably not. And is science beyond
its traditional objectivist limitations conceivable? Can one imagine a trans-
formation or extension of the natural sciences in such a way as to account
for subjectivity in the world in the full sense aimed at by Merleau-Ponty?
Is science, at least in principle, capable of observing the world in a way
that includes irreducible perspectivity, the negative, horizontality, being at
a distance, the flesh?¹⁰

Merleau-Ponty held the opinion that his critique of the underlying ontol-
ogy of science is not just an objection expressed from an external standpoint.
He argued that the natural sciences themselves hit upon the limits of the
ontology of the Great Object, and this even in the heart of their ancestral
domain, physics:

“But today, when the very rigor of its description obliges physics to recognize
as ultimate physical beings in full right relations between the observer and the
observed, determinations that have meaning only for a certain situation of the
observer, it is the ontology of the κοσµοθεωρός [cosmic observer] and of the
Great Object correlative to it that figures as a prescientific preconception. Yet

¹⁰ One approach to this question is to conceive of these as “emergent” traits. While emer-
gence is an interesting topic if and as far as it can be given a clear definition, for instance
that of a relation between different levels or modes of observation of a system (which may
even be related to Merleau-Ponty’s idea of a framework of views), it is doubtful whether any
insight is gained by declaring subjectivity an “emergent phenomenon”. If Merleau-Ponty’s
description of the situation is right, that science assumes self-identical objects while subjec-
tivity is characterized by transcendence, negativity, i.e. non-identity: Is it conceivable that
any kind of nontrivial non-identity emerges from identity?
it is so natural that the physicist continues to think of himself as an Absolute Mind before the pure object and to count also as truths in themselves the very statements that express the interdependence of the whole of the observable with a situated and incarnated physicist.” (15)

What Merleau-Ponty has in mind here are the two great advances of physics in the 20th century, quantum mechanics and relativity theory. While the latter can be easily reconciled with the classic ontology since the unity of time, space and matter constructed by general relativity is just another Great Object, Merleau-Ponty has a point with the former. But though in quantum theory the idea of a physical reality in-itself, independent of the observer, seems to find its limits, this does not lead to “a physics that has learned to situate the physicist physically” (27)—on the contrary, if anything the subject of physics appears here even more alien to the physical world it observes, because the process of physical observation is not described by physical laws. Moreover, though some authors believe otherwise, there is little reason to think that there is a substantial connection between the special traits of the quantum world and those of consciousness.

Then again, if Merleau-Ponty is right and the limitations of the objectivist ontology of science exhibit themselves not only in the investigation of consciousness but also in its core domain, such that a transformation of science appears not only desirable but inevitable: What would this mean with respect to the existing body of scientific knowledge, which was acquired on the basis of objectifying, subjectivity-eliminating procedures? If Merleau-Ponty’s phenomenological description of experience discloses the world in a fuller, deeper sense than science, if he is right that the world is made up of a system of irreducible perspectivity, that it consists of flesh, how can it be that a significant portion of it nonetheless seems to submit to its construction as a Great Object? How can we understand the pervasive success of traditional scientific methodology, or, extending Merleau-Ponty’s metaphor: how can we understand the fact that in the shape of the physical domain the flesh of the world appears to be intruded by a large foreign body? How is it possible that we can investigate and seemingly understand such vast realms of reality in an objectivist fashion without encountering the limitations of that ontology?

A possible answer is that the character of the object domains of science reflects nothing but its ruthless dressing by the scientific method. Science does not disclose, it constructs; it is just a certain mode of operation and
cannot be expected to seek adequacy towards its objects. But the characterization of science as a very specific approach based on a restricted inventory of operations—correct as it is—does not say anything about its meaning, about the content of scientific statements. What would be the point of defined methodology if not a controlled approach to a domain of objects, trying to disclose it instead of the preconceptions of the observer? Merleau-Ponty, too, does not seem to find such a fallback position very intriguing:

"Either by physics and by science we understand a certain way of operating on the facts with algorithm, a certain procedure of cognition of which those who possess the instrument are the sole judges—in which case they are the sole judges also of the sense in which they take their variables, but have neither the obligation nor even the right to give an imaginative translation to them, to decide in their name the question of what there is, or to impugn an eventual contact with the world. Or, on the contrary, physics means to say what is—but then it is today no longer justified in defining Being by the Being-object, nor in confining lived experience within the order of our 'representations' and the sector of 'psychological' curiosities; it must recognize as legitimate an analysis of the procedures through which the universe of measures and operations is constituted starting from the life world (monde vécu) considered as the source, eventually as the universal source." (17 f.)

Merleau-Ponty challenges science to stand up to its claims of disclosure, and to confront the criticism raised by the ontological aspects of the phenomenological investigation of conscious experience. Legitimate as this is, it has also to be noted that as much as objectivist science is unable to account for subjectivity in the world in the full sense, Merleau-Ponty's ontology of the flesh on its part seems to be unable to account for the apparent existence of an “objective” physical world; it does not make sense of the physical as it has been disclosed by physics. And while it is true that science may only be understood as a form of disclosure of the world by stripping it of the character of a self-sufficient operational procedure and relating it back to original modes of disclosure in everyday life, in the life world, such a trace-back should not be misconceived as a simple reduction of science to lived experience. Only by investigating the life world as the basic realm of experience in its own right and as the starting point of and motivation for that objectifying view of the world which today strikes us to be devoid of the traits of consciousness, we can hope to understand how the flesh of the world relates to the foreign body of the physical.13

13 Understanding science as a specific deviation from the life world in a comprehensive way would of course necessitate an examination of the historical genesis of modern operational science, as well as of the socialization of individual human beings into it. But maybe some facets of the relation of science to the life world can be illuminated using a shortcut,
In this phenomenologically transformed perspective, the “hard problem” is no longer the one originally stated by Chalmers. Subjectivity is surely not to be understood as consisting of some abstract “fundamental feature” called experience, existing alongside with but basically unrelated to the fundamental features known from physics. But that does not mean that, following Merleau-Ponty, the problem has been resolved; it has just been transformed. The hard problem that now presents itself is to show how conscious experience and the world-view of the natural sciences can in their disparateness and irreducibility to each other still be understood as forms of disclosure of the same world. Merleau-Ponty already tried to give an answer to this question, but it still has not been accomplished.

Conclusion and perspectives

Though subjectivity in the world is a basic fact of our everyday experience, it appears very difficult to make sense of that fact in the context of what we know of the world by means of the natural sciences. Phenomenological analysis helps to acknowledge this fact more thoroughly, to understand better what it means that conscious experience is a fundamental feature of the world, and how the subject can be seen as a condensation of more commonly existing traits of subjectivity—but while it aids in bridging the gap between consciousness and the world, the resulting view on its part does not seem to be able to accommodate what we thought to have learned about it objectively. Whereas a duality of physical and experiential objective properties is meaningless in a phenomenological perspective, we are still left with a deep disparity between Merleau-Ponty’s subjectivity-including world and the stripped-down aspect of it presented by the natural sciences.

Thus the first thing to learn from Merleau-Ponty’s ontological considerations for the science of consciousness is to be aware of that disparity—a gap not so much “explanatory”, but between different modes and meanings of being. Presently, it appears, this gap has simply to be accepted and acknowledged rather than to fall for overly simplistic solutions.

Secondly, it is to take note of the full extent of what a science of consciousness has to cope with. Merleau-Ponty gives a detailed description of namely, to envision concrete everyday situations of scientific practice in which experiential and objective aspects meet. For instance, if an experimenter investigates a correlation between conscious experience and neurophysiological processes, he learns about the experiential aspect by talking to the human subject, and about the objective aspect by means of a measurement device—that is, by two different ways to interact with the same living organism. Here, psycho-physical identity is not a metaphysical tenet, but a lived experience in itself; and the difference between the experiential and the objective appears as a difference between two attitudes or modes of interaction.
that “rich inner life” which shows how complex conscious experience actually is, how ambiguous, multifaceted, and volatile its contents are, how little it fits into categories of inner and outer world, content and mental operation, etc. The basic non-identity of conscious experience which Merleau-Ponty points out poses a problem for scientific conceptualization even without ascribing to it any ontological status.\textsuperscript{14}

Thirdly, it is to realize that a proper account of conscious experience is not going to arise from a simple continuation of standard research procedures in the sciences. This point, that the exploration of consciousness needs the development and cultivation of an alternative methodology, an important paradigm of which is to be found in phenomenological description, has already been raised.\textsuperscript{15} This implies that even though in the investigation of the domain of conscious experience certainly objectification, generalization, and formalization should be attempted just like in any other science if it seems appropriate, it is not to be expected that the science of consciousness will on the whole be of the same form as other natural sciences. Consciousness “exists” in a different way than other objects of science; its “phenomena” cannot be simply observed because they themselves are modes of appearance, of givenness. To respect this, another style of theory is necessary, as it is evident in Merleau-Ponty’s writings.\textsuperscript{16}

And finally, it would promote the current efforts towards a science of

\textsuperscript{14} As an example, see Merleau-Ponty’s treatment of the classic “ quale” red (132).

\textsuperscript{15} Varela (1996), in a response to Chalmers (1995), calls for an adoption of phenomenological methodology and proposes a research program looking for reciprocal constraints between phenomenological accounts of experience and objective observations in cognitive neuroscience. However, he does not concern himself with the fact that asking phenomenologically “how notions such as objective and subjective can arise in the first place” (p. 340) puts the validity or at least the relevance of objective neurophysiological observations into doubt. While his proposal, which was originally formulated by Varela et al. (1992), may provide a useful workaround, it does not confront the hard problem, which persists even after its phenomenological revision. — Nonetheless it surely makes sense as a pragmatic way to deal with the disparity of science and lived experience; unfortunately the idea does not seem to have found widespread adoption. More than fifteen years later, there still is no established community of researchers devoted to phenomenological description in the science of consciousness.

\textsuperscript{16} Besides phenomenology, there is another tradition that is characterized by a theoretical style significantly different from that of the scientific mainstream, and which exactly for this reason has often been scorned as unscientific: that of psychoanalysis and analytic psychology. Since it is also strong in the description of experience (albeit on a somewhat larger scale) and has a body of recorded observations, the author is convinced that the science of consciousness could be considerably enriched by its results. Moreover, via the specific focus of analytic psychology on the embedding of consciousness within an unconscious life of the psyche, which itself connects to basic organismic processes, it communicates with Merleau-Ponty’s idea of a subject “sunken into Being” (77).
consciousness to notice that a considerable amount of descriptive work has already been done and awaits confirmation and utilization. Even if one is not willing to accept Merleau-Ponty’s ideas about the flesh of the world, his work is an elaborate exposition of the reality of conscious experience which can immediately form the basis for further examinations.

Whatever progress may occur within the science of consciousness along these or other lines, the fact remains that without coming to grips with the ontological questions raised by Merleau-Ponty, we probably will never really be able to “understand that a given fact of the ‘objective’ order (a given cerebral lesion) could entail a given disturbance of the relation with the world” (200)—understand how something existing can change the mode of being itself.

The present paper is based on an earlier essay (in German) “Ansätze zu einer neuen Ontologie in Maurice Merleau-Pontys Das Sichtbare und das Unsichtbare” (1997) and a talk “From Double Aspects to an Ontology of Perspectives” given at the workshop Mind-Matter Research: Frontiers and Directions (2006). The author would like to thank Jiří Wackermann, Harald Atmanspacher, Susanne Lüdemann, and two referees for helpful comments at the various stages of this work.
References


