Two Philosophers of the Flesh:

The "Complementary" Relationship
Between Merleau-Ponty's Phenomenological Ontology and
Sungchul Ji's Biology-Based Philosophical Framework
Known as Complementarism

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Introduction

The aim of this exposition is to interrogate the remarkable "complementarity," i.e. identity-within-difference, that exists between the phenomenological ontology of Maurice Merleau-Ponty and the biology-based philosophical framework known as complementarism, developed by Sungchul Ji. As we shall see, both thinkers, despite their radically differing methodologies — Ji, a chemist and theoretical biologist, utilizing the specialized technologies and conceptual strategies of operational science, and Merleau-Ponty, a phenomenologist, concerning himself with the unadulterated life of the "perceptual faith" — have come to strikingly similar philosophical conclusions as regards the ontological status of the human body. Both thinkers have discovered a new operative logic, or, logos expressed within what appears to be irreconcilably opposed dimensions of human embodiment. Ji has thematized this corporeal logos, from the perspective of the body as living object and as viewed microscopically, in terms of the ontological category of ‘energy’ and its ‘triune logic.’ Merleau-Ponty has thematized this corporeal logos, from the macroscopic perspective of his own body as living subject, in terms of the ontological category of the ‘flesh’ and its chiasmic logic. Yet again, despite what seems to be insurmountable differences in methodology and presentation both logics appear qualitatively equivalent. Indeed, we will show that this equivalence is historically substantiated by the fact that both thinkers identified their logics with the Niels Bohr’s philosophy of complementarity. Moreover, before we explicate the specific historic-theoretical commensurabilities that connect Merleau-Ponty and Ji’s philosophies, we
shall set before ourselves what is perhaps the more daunting task of interrogating the relationship between phenomenology and complementarity as *movements*; movements of which Merleau-Ponty’s and Ji’s philosophies are perhaps exemplary, yet, nevertheless partial expressions. If we can show that the filial bond between phenomenology and complementarity pre-existed the “complementarity” of perspectives we claim to find in Merleau-Ponty and Ji’s philosophies, then our thesis will stand much stronger. It is to this larger relationship that we now turn.
(Part I)

Phenomenology and Complementarity:
Two Inseparable Movements

Although phenomenology is commonly thought to have begun with Edmund Husserl (1859-1938), and complementarity with Niels Bohr (1885-1962), one can trace back their mutual origin in the young Hegel (1770-1831) of the *Phenomenology of Spirit*, whose perspicuous concern for experience, i.e. 'sense-certainty,' and whose discovery of a non-Aristotelian logic operative therein, i.e. 'dialectic,' inaugurated the two basic themes of phenomenology and complementarity, respectively. Similarly, an in-depth investigation into the work of William James, who was of pivotal influence to both Husserl and Bohr, and who has been identified as both a "proto-phenomenologist" (James Edie) and the first thinker to discover complementarity (W. Stephenson), would undoubtedly reveal a provocative example of the natal pact between these two movements. Yet despite the fact that Hegel and James play important roles in the mutual development of complementarity and phenomenology, for the purposes of this exposition we shall do no more than roughly sketch out the convergence of the two philosophical movements in the philosophies of Edmund Husserl and Niels Bohr, who are their explicit founders.

To my knowledge, very little, if any, in-depth research has been done relating these two thinkers and their work - a surprising fact when one takes into account the contemporaneity and homogeneity of their philosophical approaches. This conspicuous lacunae in modern scholarship is all the more surprising, when confronted with the fact that many a
commentator on Husserl has identified a “hidden dialectic” (or, “hidden complementarity”) at the very heart of the phenomenological project. Conversely, the formulation of Bohr’s principle of complementarity was only made possible through the discovery of a “quantum intentionality” at the foundations of quantum mechanics. In light of these identifications, it will be no exaggeration to speak of a Husserlian complementarity and a Bohrian phenomenology.

Edmund Husserl

Although Husserl is commonly placed within the pantheon of “idealistic” philosophers, he was no stranger to the world of science. Having begun his career studying mathematics and physics, he maintained a close, career-long correspondence with men like Georg Cantor, Hilbert, and most notably, Max Planck, whose discovery of the quantum of action in 1900 would inaugurate a “new epoch in physical science” (V.I, Niels Bohr).

Husserl had similar epochal hopes for his ‘phenomenological method,’ which he introduced in his second major work Logical Investigations and which, in an uncanny synchronicity, was published the very same year that Planck made his great discovery: 1900 (pg.45, Kearney).

Indeed, it was Husserl’s close affiliation with the scientific community, and the radical changes he perceived occurring therein, that was a major contributing factor in leading him to his well-known diagnosis of the “crisis of the European sciences” and to prescribe a phenomenological remedy. Husserl believed that the crisis of the sciences, as expressed in turn-of-the-century developments in the mathematical and physical sciences,
were symptomatic of the fundamental artificiality of the traditional presuppositions that informed the positive sciences. According to Husserl, these presuppositions were genetically derived from prejudices inherent in the ‘natural attitude’ - that is the prejudices of the common man, e.g., ‘there exists a world independent of me’ - of which the “theoretical attitude” of the positive sciences were but a formal thematization. In order to overcome these prejudices, Husserl prescribed the phenomenological “epoche,” or “reduction,” which consisted in suspending the ‘objectifying’ constructions of our conceptual judgments, thus revealing the world as an experience which we live before it becomes an object which we know.

Applying this methodology to his pre-theoretical experience Husserl claimed to have discovered the “intentional” structure of consciousness, which expressed the equiprimordiality and inseparability of subject and object. Intentionality refers to the fact that all consciousness is consciousness of something, e.g. joy intends the enjoyed, imagination intends what it imagines, thought intends what it thinks, hence revealing the irreducible polarity, and yet unity of our experience. Whereas traditional metaphysics presupposed the category of ‘substance,’ subsequently enframing experience in terms of an interaction between two different kinds of substance, e.g. The Cartesian’ opposition between res cogitans (thinking substance) and res extensa (extended substance), intentionality redirected the focus back to our pre-theoretical contact with the world, wherein the separate relata, e.g. subject/object, mind/world, were reintegrated as mutual expressions of an ontologically primary relationship. (As we shall later see in
our discussion of Ji’s complementarism, Husserl’s new definition of being obeys two of the three laws in “general complementarity,” namely, Exclusivity and Essentiality.)

The notion of intentionality would prove to have profound consequences for the ideal of “objectivity” in the sciences. According to Husserl, intentionality revealed that behind the naive objectivism of the positive sciences, there subsisted the positing activity of the scientist in his capacity to constitute the very world that the naïveté and artificiality of the “scientific attitude” considered to be there as already constituted, e.g., as object. Husserl’s conclusion that the intentional structure of consciousness is behind all scientific activity, enabled him to affect a radical deconstruction of classical science, including the sciences of man which are complicit with it, revealing that what was traditionally thought of as “objective” is subjective through and through.

As we have already noted, Husserl is often thought of as an ‘idealistic thinker,’ but this reading of his work obfuscates the profound contribution his philosophy has made, both directly and indirectly, towards the deconstruction of the underlying either/or syntax that dominates the lexicon of traditional Western science and philosophy - a syntax which has succeeded in shaping the multiply opposed movements that recur throughout a more then two thousand year old tradition, e.g., the oppositions between realism and idealism, dualism and monism, humanism and naturalism, etc. Fortunately not all of Husserl’s critics have overlooked the distinctively non-binaristic, if you will, complementaristic, logic that undergirds his philosophical project. James Edie, Suzanne Bachelard, and Merleau-Ponty, to name but a few, have each in their own ways, identified, despite Husserl’s overt disdain for Hegel, a “hidden dialectic” at the heart of his thinking.
However, Merleau-Ponty, is to my knowledge, the only commentator on Husserl, who has explicitly identified Bohr’s complementarity with the phenomenological project. In a lecture addressing the state of modern science, presented by Merleau-Ponty sometime while he was the chair of the College de France (1952-1960), he observes: “As Niels Bohr has remarked, it is no accident that there is a harmony between the descriptions of psychology (we would say, phenomenology) and the conceptions of contemporary physics.” [emphasis added] (pg.120, Themes) Merleau-Ponty is here referring to Bohr’s identifications of a complementarity-like isomorphism between physics and psychology, and in the italicized portion, it appears that he is suggesting this identification be extended to include phenomenology.

In order to give the reader a better sense of how complementarity is implicated in Husserl’s project, we shall now look to an article Merleau-Ponty wrote for a commemorative collection on Edmund Husserl, published in 1959, and entitled “The Philosopher and His Shadow.” In this article, Merleau-Ponty, borrowing a Heideggerian phrase, addresses himself to the “unthought-of element in his [Husserl’s] work, which is wholly his and yet opens out on something else.” (pg.160, Signs) According to Merleau-Ponty, from Ideas II on, Husserl’s phenomenology opens up a “third dimension” in which the distinction between “subjective” and “objective” becomes problematic (again, this characterization bears resemblance to Ji’s “general complementarity,” which we will discuss later.) Taking the phenomenological reduction as an example of this dynamic, Merleau-Ponty argues that the reduction, insofar as its contradictory aim is to reflect on the unreflected, succeeds in uncovering an “identity of “re-entering self” and “going-
outside self” which, for Hegel, defined the absolute.” (pg.161, Signs) The primordial
dialectic which Husserl discovers between self and world, between reflection and the
unreflected, renders the distinction between “subjective” and “objective” problematic.
From these sorts of analyses, Merleau-Ponty will conclude that “in the last analysis,
phenomenology is neither a materialism nor a philosophy of mind. Its proper work is to
unveil the pre-theoretical layer on which both of these idealizations find their relative
justification and are gone beyond.” (pg.165, Ibid) In essence, Merleau-Ponty is showing
us that the inner significance of Husserl’s phenomenology is to break through the classical
philosophical alternatives into a “third dimension,” a “pre-theoretical layer,” wherein the
traditional antinomies are rendered equi-primordial and comprehensible, hence revealing a
complementaristic logic at the heart of his thinking. As we shall later see, Merleau-
Ponty’s own philosophy is an attempt to interrogate this “third dimension,” that is, to
regain this primordial level of Being in our bodily, perceptual encounter with ourselves
qua Flesh and the World qua Flesh of the World, thus founding a corporeally grounded
logic, and bringing the unthought elements to Husserl’s phenomenology to their fullest
fruition.

Niels Bohr

If Husserl’s phenomenology can be said to be complementaristic, Bohr’s
complementarity is no less phenomenological. Like Husserl, whose role in the philosophy
of science is often ignored, Bohr is rarely discussed among contemporary philosophers --
that is, outside the myopic circumference of the philosophy of science -- and is mostly
known in his role a physicist. However, we have only to listen to his most eminent
protégé, Werner Heisenberg, to get a sense of Bohr’s true orientation, as “primarily a philosopher and not a physicist.” Indeed, in his early youth, Bohr meditated deeply on the subject-object problem in epistemology, which he would later call “the core problem of knowledge.”(V.II, Bohr) In fact, so deeply did the problem concern him, that he considered writing a philosophical treatise on this epistemological problem after graduating from college. However, Bohr would soon abandon this project — but not the problem — as his attention shifted to revolutionary new developments in microphysics. Indeed, as Bohr found himself lead deeper and deeper into the paradoxes of microphysics, the same epistemological problems he contemplated so avidly in his youth in the realm of psychology, re-emerged, leading him to the formulation, in 1927, of the philosophy of complementarity, which would provide the theoretical foundations for quantum mechanics, and he later hoped, for all of human knowledge.

If we were to evaluate the distinctive style of Bohr’s philosophy of science, we would find that it is in direct complicity with Husserlian phenomenology. In his own distinctive way Bohr would declare that physics must go “back to the things themselves.” As Weizsacker put it, “for Bohr the objects are not behind the phenomena, but in the phenomena.”(pg.124, Honner) Or, as Bohr himself writes: “from our present standpoint, physics is to be regarded not so much as the study of something a priori given, but rather a development for methods of ordering and surveying human experience.”[italics mine] (V.III, Bohr)

It would be Bohr’s perspicuous concern with what the physicist experiences and his belief that “ultimately all observation can be reduced to sense perception,” that would lead
him, after 1937, to employ a classically phenomenological definition of the "phenomenon," as an inseparable and epistemologically irreducible relation between the observer qua measuring instrument and the atomic object observed; object and subject. This "quantum intentionality" was imposed upon Bohr by the existence of the quantum of action, which necessitated an uncontrollable transfer of energy and momentum between the atomic "object" measured and the apparatus used for measurement, hence precluding an absolute distinction between observer and observed which is a prerequisite for the idea of 'objectivity.'

In order to highlight the amazing similarities between Bohr's and Husserl's conception of the phenomenon, we quote Kearney's succinct summary of Husserl's definition of the phenomenon: "The phenomenon upon which Husserl strives to redirect our philosophical attention is precisely this experiential interface or midpoint where subject is primordially related to object and object is primordially related to subject." (pg.13, Kearney) Interestingly enough, the philosophical implications of adopting this bilateral or "intentional" definition of phenomenon, lead both thinkers to reject the hereditary assumption of a reality existing in-itself, independent of its phenomenal manifestation in perceptual experience. Rather, both thinkers regarded this assumption as an "idealization." By rejecting this age-old "substance or noumenal oriented" assumption that is essential to both classical physics and metaphysics, Bohr and Husserl were taking the "transcendental turn" inaugurated by Kant, and indeed critics of both thinkers have made this "Kantian" identification.

The anti-realistic implications of Bohr's discovery of "quantum intentionality," in
no way exhaust its philosophical implications. Indeed, we have not yet discussed the philosophical contribution that Bohr is most famous for, namely, the logic of complementarity, and how he derived it from “quantum intentionality.”

“Quantum intentionality,” is at the heart of the observation problem in quantum mechanics, and it leads to an insurmountable exclusivity in any attempt to exhaustibly account for microscopic phenomenon; this exclusivity inspired Bohr to formulate the principle of complementarity. Let us recall that the “quantum intentionality” refers to a situation of irreducible wholeness between subject qua measuring instrument and the object, consummated, of course, through the quantum of action. Because each act of observation is epistemologically irreducible, and hence cannot be combined into a single picture with the information revealed through any other act of observation, the information derived from one measuring apparatus will be mutually exclusive to the information derived from another measuring apparatus; no classical synthesis between the two is possible. It is this mutual exclusivity, forced upon the microphysics by “quantum intentionality,” which lead Bohr to view the information revealed by different measuring devices as complementary, instead of contradictory. Light, for example, can be observed under different experimental conditions as either a wave or particle, but not both simultaneously. Before Bohr’s introduction of the complementary view, physicist refused to believe that the nature of light involved such a radical contradiction. Physicists took sides, opting either for the wave or particle representation as the sole accurate description. Bohr’s contribution to the debate was to supplant the wave-particle duality, replacing it
with a wave-particle complementarity, arguing that both the wave and particle
descriptions are needed to fulfill an exhaustible account of the phenomenon.

In summary, we have tried to show that Bohr’s phenomenological methodology
lead him to a distinctively Husserlian or “intentional” definition of the phenomenon. This
lead Bohr both to refute the claims of philosophical naturalism, and to formulate the
principle of complementarity.

The identity between Bohr and Husserl’s philosophies could be explored much
further. For instance, both thinkers recognized in their time a “crisis” (Husserl) or
“cultural rift” (Bohr) in the European sciences, which they thought their philosophies
could help resolve. Husserl once likened his philosophy to the metaphorical equivalent
of the central nervous system of the sciences. He envisioned phenomenology as a
‘science of science’; a multi-tiered project, geared towards describing and classifying the
phenomenon of all the other sciences, e.g. psychological, physical, mathematical, social,
historical, phenomenon, each type having its own “regional ontology.” In Husserl’s vision,
all these different types of phenomena could be related back to the constituting subject:
the transcendental ego, through a series of phenomenological ‘reductions,’ hence
guaranteeing the unity of the sciences in universal subjectivity. In a similar way, Bohr
believed that complementarity offered an “epistemological lesson” which might help
resolve the age old problem of the “unity of knowledge,” as he called it. In connection
with this idea he writes:

In our century the immense progress of the sciences has not only greatly
advanced technology and medicine, but has at the same time given us an
unsuspected lesson about our position as observers of the nature of which are
part ourselves. Far from implying a schism between humanism and physical
science, this development entails a message of importance for our attitude to
common human problems, which - as I shall show - has given the age old question of the unity of knowledge new perspective. (V. III, Bohr)

Bohr would go on to identify a complementarity-like logic in the fields as diverse as biology, psychology, philosophy, anthropology, sociology, politics, and Eastern religion. Although Bohr never answered the all-important question as to what makes the isomorphism at all possible, he did succeed in anticipating the possibility, like Husserl, that a comprehensive foundation for the sciences of man and nature might be found.

The underlying identity between Husserl and Bohr can be explored much further, but for the purposes of this exposition we only wish to point out the fecund possibility of this line of research, and moreover, to prepare a sense of the historicity that exists within the relationship between Merleau-Ponty's phenomenological or "Flesh" ontology and Sungchul Ji's biology-based philosophical framework known as complementarism, which will be the central concern of this exposition. In many respects Merleau-Ponty and Ji have carried through the inner movement, or to use a Merleau-Pontian phrase, "unthought elements" of both Husserl and Bohr's projects, respectively, and in that regard, represent their most eminent expressions. If we are to find a clear example of the natal pact between phenomenology and complementarity, or between philosophy and science, for that matter, it will be found within the complementary relationship that manifests itself between these two thinkers. It is to this relationship that we now turn.
(Part II)

Merleau-Ponty’s Flesh ontology and
Sungchul Ji’s Complementarism

The remainder of our discussion will concern the remarkable “complementarity” that exists between the phenomenological ontology of Maurice Merleau-Ponty, and the biology-based philosophical framework developed by Sungchul Ji, known as complementarism. We have employed the term “complementarity” in this context for two distinct reasons. First, because it so adequately conveys a sense of identity-within-difference which manifests itself so profoundly within the relationship between these two philosophies. Second, because it conveys a sense of their deep historical commensurability, insofar as both thinkers explicitly identified their thought with that of Niels Bohr, the founding father of complementarity.

Niels Bohr was a source of inspiration for both thinkers, and each thinker in his own idiomatic way, understood Bohr’s complementarity as a comprehensive framework or general style of thinking, within which the traditional antinomies that dominate the Western intellectual tradition could be successfully overcome (though, not altogether transcended). In a voice that could just as well have been Niels Bohr’s, Merleau-Ponty wrote: “Today each traditional category calls for a complementary (that is, an incompatible and inseparable) view, and it is under these difficult conditions that we are looking for what makes up the framework of the world.” (pg. 122, Signes)

One such categorical antinomy in need of a “complementary view,” was that holding between science and philosophy. Throughout his career, Merleau-Ponty sought
to articulate a more complementaristic balance between the two - a view which finds succinct expression in the following passage:

There can be no rivalry between scientific knowledge and the metaphysical knowing which continually confronts the former with its task. A science without philosophy would literally not know what it was talking about. A philosophy without methodical exploration of the phenomena would end up with nothing but formal truths, which is to say, errors (pg. 97, Sense and Non-Sense)

Indeed, one still finds this relationship of central concern in Merleau-Ponty’s last work, *The Visible and Invisible*, which was tragically interrupted by his death. Nowhere is this expressed more clearly than in a working note, written one year before he died, where he speaks of the “necessity of formulating an ontology “complementary” to operational science.” (pg. 225,VI) Whether or not the ontology here referred to is like the traces of the one Merleau-Ponty has left with us, and whether or not the “operational science” indicated here as being its complement can be meaningfully related to Sungchul Ji’s, remains to be seen. But in another working note written around the same period, in which he speaks of an “intertwining of biology or psychology and philosophy,” (pg.172, Ibid.) this possibility almost seems to take on the character of a premonition. Sungchul Ji also addresses this possibility when he writes: “although complementarism originated in biology, its applicability may be extended far beyond biology - - to physics, cosmology, human science and metaphysics.” We would say this is an understatement. Indeed, we need only provide a rudimentary tabulation of the general points of resemblance between both of these philosophical systems, to see that this talk of their “complementarity” is more than just a possibility:

1) Both systems are radically biology-based, insofar as they are ontologically grounded in the study of the human body.
2) Both systems enframe the fundamental ontological problematic in terms of a complementaristic pairing of the 'visible' and 'invisible.'

3) Both systems refuse linear causality, opting from a relationship of simultaneity between two terms.

4) Both systems introduce a "third term" to account for the relationships existing between term A and term B (In Complementarism: "Transcendentalism." In Merleau-Ponty's ontology: "Transcendence," "Wild Being," "Flesh," or "Chiasm.").

5) Both systems relate this "third term" to the principle of the Tao (Actually, in the case of Merleau-Ponty's ontology, two Merleau-Pontian scholars, Sue Caltaldi and Glen Mazis, have pointed out this similarity)

6) Both systems identify with the work of Niels Bohr

7) Both systems recognize a fundamental symmetry breaking related to expression

8) Both systems recognize an "ontological transduction" (Ji) or "dehiscence" (Merleau-Ponty) of the primordial term (C) into two terms (A and B).

9) Both systems provide a logic that outstrips the intellectual antinomies of the Western tradition.

In light of the profound differences that exist between these two systems, I do not hesitate to call these points of resemblance astounding. Indeed it will be helpful to restate the differences between these two systems so that their identities can take on their full meaning.

There appear be two distinct levels of difference, as regards their approach to the human body: 1) The ontological difference between the body-for-itself and the body-for-others. 2) The methodological difference between macroscopic and microscopic levels of analysis.

The distinction between the body as "body-for-itself" and "body-for-others," was first introduced into contemporary existentialism by Sartre, who saw these two components of embodiment as two entirely different ontological orders - as profound as the difference between an eye qua seeing, and an eye qua object of dissection. Sartre's
bifurcation of these two dimensions into irreconcilable dimensions is analogous to Merleau-Ponty’s own bifurcation of the body into the first-person or “phenomenal” body and the third-person “objective” body, and accomplishes for both thinkers a polemic against the behaviorist’s attempt to reduce human experience to mechanistic and deterministic explanations borrowed from the natural sciences. By envisioning the body in its radical duality as, on the one hand, being strictly determinable from without through the conceptual frameworks of mechanist science, and on the other hand, as irrevocably free, insofar as the first-person experience of the body is accessible only from within, Merleau-Ponty and Sartre were able to affirm the autonomy of phenomenology, without falling into the extreme idealist’s absurdity of absolutely rejecting the validity, even the relative validity, of scientific explanations of the body.

Merleau-Ponty, then, comes to the embodiment from perspective of the ‘body-for-itself,’ that is, the body as the living subject of perception, whereas Ji’s approach to embodiment comes from the perspective of the ‘body-for-other,’ that is, the body as an “otherly” object of perception. Their different approaches are therefore grounded in an ontological difference inherent within human embodiment.

As pertains to the second level of difference, Merleau-Ponty’s approach is based upon what he called the “perceptual faith,” which is the bodily subject’s pre-theoretical inherence within a world that he needn’t thematically reflect on, in order to understand and live in. As such, Merleau-Ponty’s methodological access to the world and the body is articulated through the unaltered life of the senses. In contradistinction, Ji’s thought evolves out of the methodologies of molecular biology, which deals with aspects of human embodiment, strictly invisible to the natural or phenomenological gaze. Molecular biologists use sensory-extending devices, e.g. microscopes, thermometers, and complex inferential reasoning, to bring us beyond the limits of phenomenological experience. Also, the practice of molecular biology involves radically altering, sometimes to the point of destroying, the “objects” it studies. The methodological differences, then, are no less profound than the ontological differences between Merleau-Ponty and Ji’s philosophies.
That there should be a logical isomorphism between the yawning chiasm of ontological and methodological of differences, is quite remarkable, and opens up the possibility that Sartre and Merleau-Ponty’s onto-valuation dualism, where first the two dimensions of the embodiment are considered irreconcilably opposite, and where second, the body-subject is prioritized over the body-object, may be too extreme a differentiation. Indeed, the fact that each thinker has found a complementaristic logic operative on what are radically differing aspects of human embodiment, leads to the possibility that these two dimensions are not simply in a relation of “contradiction” but rather, a relation of “complementarity.” However, before we shall address the possibility of this complementarity any further, we must formally explicate how each thinker came to thematize their corporeal logics and what significance it has within their philosophies.

**Sungchul Ji’s Complementarism**

According to Ji, the “primary impetus to formulate complementarism in 1991 - 1993, came from the unexpected realization that a Bohr-like complementarity principle is integral to biocybernetics.” (pg. 1, *Complementarism*) Admittedly, then, complementarism can be viewed as a continuation and further empirical substantiation of Bohr’s initial insight into the possibility of a complementarity-like logic, applicable to fields outside of physics. However, whereas Bohr’s anticipations about complementarity in biology were based on no more than a layperson’s knowledge of the biology of the first half of this century, Ji’s discovery of a Bohr-like complementarity was completely “unexpected,” and imposed upon him by an accumulating mass of experimental evidence, much of which was revealed after Bohr’s time. It was only after Ji was able to synthesize the massive amount of evidence in his field in a theoretical framework which he named ‘biocybernetics,’ that
the essentiality of a Bohr-like complementarity within the biological sciences was revealed. One of the key concepts embedded within biocybernetics is the notion that chemical and physical processes responsible for life of the cell are not driven by traditional “free energy” alone but by a new entity called “gnenery,” a complementary union of free energy and information. The phrase, “complementary union of free energy and information,” indicates the notion that ‘gnenery’ cannot be measured experimentally but only its energy and information aspect separately, just as the “wave” and “particle” aspects of light must be measured separately.

Ji’s discovery of “gnenery” inspired him, first, to generalize and ontologize the logic of complementarity, and then, to look for a biological substrate for this new logic in the neurophysiology of the human brain.

At this point it will helpful to show just how Ji went about generalizing and ontologizing the logic of complementarity.

As we have already pointed out, Bohr’s term “complementary” describes a situation, unavoidable in quantum physics, in which two theories thought to be mutually exclusive are required to explain a single quantum efficacy. Light, for example can only be explained as both wave and particle, but no synthesis of the two possible. Bohr saw the application of complementarity to the wave-particle duality to be strictly epistemological in nature, specifying the limits of what we can know and communicate about our experimental interactions with light, that is, what idealizations we can use to represent light, without specifying in any ontological sense what light essentially is.’ This is why
Bohr often referred to the philosophy of complementarity as the “epistemological lesson” of quantum mechanics, and why he attributed an egological origin to the generality of complementarity: “The nature of our consciousness brings about a complementary relationship in all domains of knowledge.” (V.11, Bohr). In order to draw out the ontological implications of Bohr’s wave-particle complementarity, and in order to clarify the meaning of complementarity, in a strictly formal way, Ji has formulated the principle of “general complementarity” (also known as the “trine logic”) which subsumes Bohr’s complementarity as a “special case,” and which specifies a unique relationship among three entities, A, B, C, with the following constraints:

(1) **Exclusivity** - A and B are mutually exclusive in such a way that A cannot be derived from B nor B from A (e.g. light can exhibit both wave or particle properties, but its wave properties cannot be derived from its particle properties, nor vice versa).

(2) **Essentiality** - A and B are both essential to completely describe C (e.g., light cannot be described by wave or particle properties alone but only as a complementary expressions of both)

(3) **Transcendentality** - C transcends the level of description where A and B have meanings and serves as the source of or the ground of the irreconcilably opposite A and B. Depending on the experimental arrangements for measurements, C can be manifested, retified or transduced as A or B) (pg.7, Complementarism)

Recognizing that “quantum mechanics is silent about the relationship between C and A or between C and B,” Ji introduced the concept of “ontological transduction,” to indicate the C to A or C to B transformation. This is a decisive step in the evolution of the idea of complementarity, insofar as “general complementarity” renders intelligible the quite
obvious fact that in order for there to be A (wave) and B (particle) there must be a third term C (light itself), which is responsible for their appearance. The reason why Bohr was unwilling to address himself to the ontological implication of his principle, was because his phenomenological methodology prohibited him from attributing “existence” to what does not appear phenomenally in experimentation.

Although the ‘triune logic’ was formed against the backdrop of Bohr’s epistemological formulation of complementarity, it was actually Ji’s discovery of “energy,” as the operative principle which is responsible for driving all the chemical and physical processes responsible for Life, which was his initial inspiration for ontologizing complementarity. This will become clearer as soon as we explicate the origin and nature of “energy.”

“Energy,” which means, quite literally, “a complementary union of “energy” (erg-) and “information” (gn-) was introduced into molecular biology in order to resolve a paradox inherent within the practice of molecular biology known as the “cellular uncertainty principle (CUP).” (pg. 4, Complementarism) According to the CUP, experimental constraints in molecular biology forbid the simultaneous measurement of the physico-chemical and genetic dimensions of cellular processes, much in the same way that Heisenberg’s uncertainty principle forbids the simultaneous measurement of both the position and momentum of a physical system. Because living systems are highly dynamic, undergoing literally millions of energetic transformations each second, the measurement of the internal structure of a say, a protein, involves radically altering the living system through freezing and subsequently killing it, thereby precluding the possibility of the
simultaneous measurement of the energy state that would correspond to the information state uncovered. These circumstances have led molecular biologists to consider the physico-chemical and genetic levels of cell processes in isolation from each other, thereby fostering the illusion that they are fully comprehensible when considered separately. Furthermore, because of the "genetic" revolution inaugurated by Watson and Crick's discovery of the double-helix, in the second half of this century, enthusiastic molecular biologists have over-stressed the importance of the genetic aspect of cell structure, thinking that if they can explain the genetic structure of life, they can explain life itself. JI's energy emerges within this context as a way of reinstating the "thing itself," that is Life itself, into molecular biology. Rather than stressing the energetic or the informational aspects of cell structure and behavior as the key to understanding life, to the exclusion of the other, energy, as a complementary union of "energy" and "information," represents the equiprimordiality of both dimensions in exhaustibly accounting for life. But perhaps more importantly, energy is not reducible to its energetic and informational aspects, but is a principle expressive of Transcendentality, insofar as it exhibits an irreducible opacity vis-à-vis the refractory gaze of the molecular biologist - much in the same way that Light itself is impossible to render empirically present. Summarily, energy is both "information" and "energy," and yet it is neither. It is "both" in the sense that it is the condition for the possibility of all measurements concerning cell behavior, and it is "neither" in the sense that Energy as Life itself, can never be reduced to a mechanical description. It is this "both," "neither," nature of energy which enabled JI to understand complementarity ontologically, and provided him with the impetus to ontologize and generalize Bohr's
complementarity.

Once Ji had succeeded in generalizing the logic of complementarity, he sought a biological substrate for it in the human brain. According to modern medical science, the human brain exhibits a functional complementarity, such that the left and right hemispheres perform qualitatively distinct, yet complementary functions. Examples of these complementarities are as follows:

<table>
<thead>
<tr>
<th>Left Hemisphere</th>
<th>Right Hemisphere</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Verbal</td>
<td>Nonverbal</td>
</tr>
<tr>
<td>2. Logical</td>
<td>Gestalt</td>
</tr>
<tr>
<td>3. Rational</td>
<td>Intuitive</td>
</tr>
<tr>
<td>4. Analytical</td>
<td>Synthetic</td>
</tr>
<tr>
<td>5. Sequential</td>
<td>Simultaneous</td>
</tr>
<tr>
<td>6. Explicit</td>
<td>Tacit</td>
</tr>
<tr>
<td>7. Objective</td>
<td>Subjective</td>
</tr>
<tr>
<td>8. Abstract</td>
<td>Concrete</td>
</tr>
</tbody>
</table>

(pg.8, Ibid.)

Although these categories are somewhat arbitrary, they do underscore a very important point, namely, that the left and right hemispheres are qualitatively or functionally asymmetric, despite the fact that both hemispheres appear physically symmetrical. And yet, there is some evidence that a structural or physical complementarity exists within the brain, as well. Ji has identified evidence for this thesis in Norman Cooke’s "topographical inhibitory model" which describes a structural complementarity in the
interaction of the two hemispheres through the corpus calosum. Indeed, a strictly visual
survey of the anatomical layout of the human brain lends intuitive support to the idea that
a “triune logic” has a neurophysiological architecture. One need simply observe that the
left hemisphere (A) and the right hemisphere (B) are connected communicatively through
the bundle of nerves that make up the corpus calosum (C).

From the assumption that the validity of “general complementarity” rests on both
structural and functional complementarities in the human brain, Ji has derived a set of
ontico-epistemological hypotheses, which constitute the philosophical infrastructure
of complementarism:

(1) The human brain perceives the ultimate reality through a cooperative
    action between the right and left hemispheres.

(2) To communicate the perceived reality to others, humans use predominately
    the left or the right hemisphere at a given time and cannot use both
    simultaneously.

(3) The ultimate reality perceived and (incompletely) communicated by the human
    brain is a complementary union of irreconcilable opposites.”

(PP. 7-8, Complementarism)

We shall address the significance of these three hypotheses in their relation to Merleau-
Ponty’s ontology at the conclusion of this exposition.
Merleau-Ponty’s Ontology of the Flesh.

Merleau-Ponty arrived at his ontology of the Flesh, through an arduous, career-long interrogation of Husserlian phenomenology. Although Sartre was of pivotal influence in the development of Merleau-Ponty’s thinking Husserl was undoubtedly Merleau-Ponty’s primary interlocutor. It would be Merleau-Ponty’s continuous effort to ‘flesh out’ the “unthought elements” of his mentor’s project, which would lead him, in an unfinished manuscript written at the end of his life, entitled *The Visible and Invisible*, to a distinctively ontological resolution of a series of conceptual difficulties inherent in the fundamental theses of the phenomenological project - conceptual difficulties which he was unable to exorcise in his earlier two works, *The Structure of Behavior* and *Phenomenology of Perception*, wherein he had uncritically adopted certain problematic tenets of Husserlian phenomenology, e.g., “the philosophy of consciousness.” In my opinion that Merleau-Ponty’s ontology must be viewed as both a continuation of the basic themes of Husserlian phenomenology, which include: “philosophy as rigorous knowledge, philosophical radicalism, and the autonomy of philosophy,” (pg.77, Madison) as well as a distinctive break from its immanentist tendencies, which would tend to reduce the world of experience to a projection of transcendental subjectivity. In this regard, then, we would lead to agree with M.C. Dillon’s assessment that,

one must understand Merleau-Ponty’s philosophy as an attempt to preserve the fundamental truth of the Franco-German phenomenological movement by incorporating it within the context of the ontology that is demanded by that truth, that is, as an attempt to rescue phenomenology from the undermining influences of the retreat to immanence that has characterized transcendental philosophy since its inception.” (pg. 189, *Merleau-Ponty’s Ontology*)
Indeed, Merleau-Ponty, already in the *Phenomenology*, will reject this immanentist tendencies within Husserlian phenomenology, by stating that the "most important lesson that the reduction teaches us is the impossibility of a complete reduction." (xiv, *PhP*) As you may recall, for Husserl, the ultimate goal of phenomenology was to perform a series of epoches, or reductions, whereby our natural belief in a world existing "out there," independent of our perceptual consciousness, would be suspended. Husserl believed that this suspension could be achieved through a continually deepening reflection on our lived experience, culminating in the *complete reduction* of conscious experience to the constituting activity of transcendental subjectivity.

Merleau-Ponty's conclusion that such a complete reduction is "impossible" does not necessarily imply a radical break from the Husserlian project because there are indications in Husserl's last work, *The Crisis of the European Sciences*, that he himself was starting to recognize the inherent difficulties in the "philosophy of consciousness," and that he himself was starting to doubt the possibility of a 'complete reduction.' In a section of the *Crisis*, entitled, "The paradox of human subjectivity: being a subject for the world and at the same time being an object in the world," Husserl acknowledges that if a full reduction to transcendental subjectivity was actually accomplished, this would lead to the paradoxical conclusion that "the subjective part of the world swallows up, so to speak, the whole world and itself too. What an absurdity!" (pg. 180, *Crisis*) Ultimately, Husserl will reassure himself that this "absurdity" is only an apparent one, insofar as it is an expression of the illusions of a not-yet fully reduced consciousness. However, the fact that Husserl himself was beginning to question certain problematic dimensions of his
"philosophy of consciousness," lends historical support for Merleau-Ponty's later efforts to bring phenomenology to ontological explication.

In order to understand how Merleau-Ponty overcomes the immanentist tendencies of Husserlian phenomenology, we need only look to those tendencies emerge his own work, and how he will overcome them. In the *Phenomenology* Merleau-Ponty based himself on the Husserlian notion of intentionality in order to eliminate the dualism between subject and the world (moreover between consciousness and the body). He conceived the body-subject and the world as two dialectical moments, reciprocally defined (like the two poles of Husserl's intentionality) of a singular circular system. As such, the subject is defined as a being in the world, a project of the world, and the world is in sum the correlate of the bodily projects of the subject; one term is unintelligible without the other. The obvious benefit of this system is that body and world are no longer envisioned as two independent substances, as with Cartesianism, but because the two terms are now inextricably fused in a dialectical circularity, we are left with an ontological relativism as the final truth. Indeed, nowhere is there any indication of what makes this dialectical opposition between body and world possible.

It is within the context of these difficulties, that the later Merleau-Ponty will explicitly reject the bifurcation of "consciousness of" and the object", i.e. Husserlian intentionality, and which was the underlying thesis of both of his earlier works, and will try to "recommence everything." (pg. 130, VI) His explicit task is to bring his earlier phenomenological studies to "ontological explication." Merleau-Ponty will now address himself to a Being that is not just in front of the philosopher, like the object-pole of intentionality,
but which subtends or 'trans-descends' (pg.259, VI) the philosopher (A) and the world (B) from below as a cosmological principle (C) that both separates and unites. That Being is Flesh.

The Flesh is a new term for what Merleau-Ponty formerly called the 'lived body.' However, it cannot be placed within the traditional framework of thinking the body in terms of substances: "We must not think the flesh starting from substances, from body and spirit - for then it would be union of contradictories - but we must think it, as we said, as an element, as a concrete emblem of a general manner of being." (pg.147, VI) The Flesh is the unperceived condition that makes perception possible; it is what Sartre called a "transphenomenal" Being. As a "double-belongingness" to both "subjective" and "objective" orders, or as the "formative medium of subject and object," the Flesh is what gives rise to the two sides of our experience, without itself being directly present to our overtly conscious experiencing. Now, in order to understand what Merleau-Ponty means by the Flesh, we needn't rely on language alone. For, Merleau-Ponty did not simply think the Flesh into existence as a means of resolving tradition antinomies. He simply attended to the evidence of his own body's perceptual faith, and carefully interrogated and documented what he found there. Indeed, if his thesis is correct, that is, if it is more than just a thesis, we should be able to do the same. Let us now get in touch with our Flesh:

1) Begin to palpate an object with your right hand (As you explore the object, you may notice that your touching is 'effacing itself in favor of' what it touches, that is to say, it is the object that you are touching and not your hand doing the touching that is within the focus of your awareness.)

2) Now, while your right hand is palpating the object, take your left hand and touch your right hand touching. What happens? (What you should feel
happen, is that your right hand’s attention fades away from the object it is palpating, and now feels itself become an object for your left hand.

Now, let us reflect on what has just happened. In one sole structure: your right hand, you have felt two irreconcilably opposite modes of being: 1) touching 2) and being-touched.

What Merleau-Ponty will conclude from this remarkable experience, is that there is always an asymmetry between the touching (A) and the touched (B), or more generally, between percipience and perceptibility. Either your body is an active, interrogative subject that renders the things of the world present, or, your body is a passively disposed object, which is itself a thing among things, but never both simultaneously (c.f. the principle of Exclusivity). However, this does not mean that he is saying that these two orders of experience: the touching and the touched, are irreconcilably opposed as is the case with Cartesian dualism. To the contrary, regardless of whether my hand is a touching or touched, in both instances there is a numerically identical hand that undergoes both operations (c.f. the principle of Essentiality). This leads Merleau-Ponty to conclude that where there is no identity of the touching and the touched, or, the percipient and perceptible sides of my body, by fact, there is an identity of the two, by principle - “always abortive.” The Flesh is a principle of identity-in-difference, and it constitutes a “chiasm” which both separates and unites these two sides of bodily Being. And yet, we are never able to reflexively grasp the Flesh by itself, because it is what makes our grasping and being-grasped possible. The Flesh’s absence to reflection -- that is, its inability to fully coincide with itself -- does not mean that it constitutes a “negativity.” To the contrary,
the Flesh is "not an ontological void, a non-being; it is spanned by the total being of my body, and by that of the world." (pg. 148, VI) The Flesh is Life itself, encompassing both the world’s being and my being in its chiasm, and yet the moment we wish to render it fully present through reflection, our "perceptual faith" collapses and we are left with only its traces as a vague related duplicity.

For Merleau-Ponty the reversibility of the Flesh, its "chiasmic logic," is the "ultimate truth." In his last work, he was already beginning to apply this new logic to the problem of intersubjectivity, language, and ideality. If the quite obvious similarities between Merleau-Ponty’s "reversibility" and Ji’s "general complementarity" do not itself suffice to convince the reader that we are here dealing with two expressions of one and the same logic, we might take note of a critical passage in the second chapter of the VI, entitled "Interrogation and Dialectic," where Merleau-Ponty himself makes this identification.

In "Interrogation and Dialectic," Merleau-Ponty engages in a radical critique of Sartre’s analytic of Being and Nothingness, in order to fully differentiate his views from the latter. Against Sartre’s ultra-dualistic opposition between pour-soi (Being-for-itself) and en-soi (Being-in-itself), Merleau-Ponty will introduce his notion of the "hyper-dialectic," which can be viewed as something like the skeleton of the Flesh ontology which he will introduce two chapters later. What is significant about the "hyper-dialectic" is that he will define it with the help of Bohr’s principle of complementarity, hence lending credibility to our thesis that Merleau-Ponty’s Flesh and its chiasmic logic is equivalent on both historical and theoretical levels to Bohr’s complementarity.
Before we address the critical passage, it is interesting to note that in "Being and Nothingness," Sartre asks the provocative question: can Being and Nothingness be considered, “complementary” to each other, and answers with a definitive No. It would seems that Merleau-Ponty’s ‘hyper-dialectic,’ as a synonym for a complementary-logic, would bring us back to Sartre’s initial question, and re-answer it: Yes, they are complementary. What follows, is the winding down of Merleau-Ponty’s forty-one page critique of Sartre’s dialectic of Being and Nothingness:

Has not our discussion consisted in showing that the relationship between two terms...covers a swarm of relations with double meaning, incompatible but necessary to one another (complementary, as physicists say today), and that this complex totality [the hyper-dialectic] is the truth of the abstract dichotomy from which we started [Sartre’s analytic of Being and Nothingness]? (pg. 91, VI)

This is a passage of utmost significance because it indicates that Merleau-Ponty saw a filial bond between Bohr’s complementarity and the new definition of Being he was struggling to articulate.

**Conclusion**

This exposition has attempted to reveal that both Merleau-Ponty and Ji’s philosophies are “complementary,” insofar as they have revealed a qualitatively identical logic operative within human embodiment, despite the radical differences of their methodologies. Moreover, we have addressed the possibility that this “complementarity” bares
the weight of a great historicity, insofar as phenomenology and complementarity were from their inauguration, intimately related movements. Niels Bohr was the primary symbol of this historicity, insofar as his philosophy of complementarity bore many significant resemblances to Husserlian phenomenology, and insofar as both Merleau-Ponty and Ji have identified their new logics with his.

We would now like to re-address ourselves to the question we began this exposition with, and which was this exposition’s initial inspiration, namely, how are Merleau-Ponty and Ji’s philosophies to be considered complementary? In this context, we mean more than ‘how are these philosophies both identical and different from each other?’ Rather, we would like to know how they “form a couple more real than their parts,” (pg.132, VII) or, how they mutually affirm each other. This question is of utmost significance, insofar as it brings to mind the far more general question of the relationship between science and philosophy implicated within it. Indeed, if we can show how Merleau-Ponty and Ji’s philosophies are “complementary,” in the second sense that we have indicated, we may also be revealing a hitherto unprecedented complementarity between philosophy and science.

There are three distinct instances of a “mutually affirming” relationship between Merleau-Ponty and Ji’s philosophies. They are: 1) the relationship between Merleau-Ponty’s touching-touched complementarity and Ji’s neurophysiological explanation for “general complementarity.” 2) the relationship between “symmetry breaking” in both Merleau-Ponty and Ji’s philosophies. 3) The relationship between Merleau-Ponty’s
Flesh and Ji’s energy. We shall address the first two instances of “complementarity” within the context of several important observations made by Drew Leder pertaining to the conspicuous absence of the role of the brain in the history of phenomenological thinking - a problem which Ji’s neurophysiological approach to perception may help to resolve.

Drew Leder has pointed out that phenomenologists have rarely considered the importance of the brain in their analyses. He attributes this conspicuous absence to two reasons. First, because phenomenologists have been methodologically committed to emphasizing only what presents itself to perceptual consciousness in the pre-theoretical, pre-scientific world of normative experience. Insofar as the phenomenologist is concerning herself purely with what presents itself phenomenally in her first-person experiencing, the brain, which is a necessary condition for the possibility of that experiencing, will be irrevocably absent from that experiencing. Leder argues that only because the brain is absent from direct, first-person experiencing, one is not justified in neglecting its central role in perception. There is a great intersubjective fund of information on the brain’s structure and function which should not be neglected.

Second, Leder thinks that phenomenologists habitually avoid all talk of the brain because of their belief in the autonomy of philosophy, and their deep mistrust of reductionistic attempts to reduce consciousness or perception to a function of neurophysiological mechanisms. (pg. 111, Leder)

Merleau-Ponty appears is no exception to this pattern. Although Merleau-Ponty dealt heavily in neuropathology in his first two works, he was unaware of the structural
and functional complementarities revealed only within the past two decades through experiments with split-brain patients. This unnerving lacunae in Merleau-Ponty’s work, I believe, can be resolved through Ji’s explorations of the biological inscription of a complementary-logic in the human brain, and its affect upon perception.

In regard to the first “complementarity,” I believe that Merleau-Ponty’s discovery of a touching-touched complementarity inherent in the nature of tactile perception — a discovery which is the paradigmatic experience upon which his entire ontology is founded — may have a neurophysiological correlate in the human brain. Indeed, Drew Leder has suggested that the brain be considered a “microchiasm,” insofar as all of the body’s motor and perceptual abilities converge within it. (pg. 114, Leder) Is it not possible that the “chiasmic logic” Merleau-Ponty finds operative throughout the many dimensions and modalities of the lived-body, may be meaningfully related to the structural and functional complementarities modern medical science has found operative within the human brain? If this is so, Ji’s neurophysiological approach to the logic of complementarity, and Merleau-Ponty’s perceptual approach, affirm each other in a unprecedented manner.

In regard to the second “complementarity,” I believe that Ji’s thesis that a “symmetry breaking” between the left and right hemispheres occurs whenever we try to express what we perceive, lends neurophysiological support to Merleau-Ponty’s notion of the “perceptual faith.” According to the three hypotheses we addressed in our discussion of complementarism, the human brain is said to operate cooperatively in the act of perception, hence revealing the “ultimate reality,” which is beyond the dualistic
categories we use to describe experience in language. But the moment that we attempt to express this perception, we must use either our right or left hemispheres, but not both simultaneously. This causes a breaking of symmetry between the two hemispheres of the brain, and hence a bifurcation of the reality we experience, into irreconcilable categories, like thought and emotion, body and mind, self and not-self. This thesis, although having only tentative support in the literature on brain research, if eventually it is substantiated, may lend hard factual support to Merleau-Ponty’s “intuitive” descriptions of our pre-theoretical experience of the “perceptual faith.”

For Merleau-Ponty, the “perceptual faith,” is a seemingly indubitable experience — in the naive sense — whereby we needn’t explicitly think being, in order to know we are intimately intertwined with Being. Merleau-Ponty writes: “each of our perceptions is an act of faith in that it affirms more than we strictly know...” (pg. 179, SNS). But the perceptual faith is utterly allusive: “But what is strange about this faith is that if we seek to articulate it into theses or statements, if we ask ourselves what is this we, what seeing is, and what thing or world is, we enter into a labyrinth of difficulties and contradictions.” (pg. 13, V) I believe that Ji’s identification of “symmetry breaking” as being a phenomenological consequence of the brain’s neuro-architecture, provides a convincing neurophysiological explanation for Merleau-Ponty’s “perceptual faith.”

The third and final instance of “complementarity,” concerns the relationship between Ji’s qinergy and Merleau-Ponty’s Flesh. Let us recall that qinergy is a synonym for Life in Ji’s philosophy, and yet, even though it is the condition that makes possible the measurement of both the “energetic” and “informational” aspects of cell behavior and
structure possible, it is itself refractory to the molecular biologist’s understanding. This is a fundamental limitation, insofar as gnergy cannot be proven to exist through the experimental methods of molecular biology, but can only be an inferred existent. Gnergy thereby may seem to some molecular biologist to be nothing but an empty concept. Moreover, the non-imperceptibility of gnergy, has quite absurd implications for the practice of molecular biology, insofar as it indicates that molecular bio-logy cannot prove the existence of, nor intimately encounter, the very Life, the bios, which it supposedly studies. What Merleau-Ponty’s interrogation of the lived-body accomplishes in this context, is to provide what is impossible in molecular biology, namely, a direct experience of gnergy, insofar as we are the “first-person” expression of gnergy! That is, insofar as we are a consolidated mass of “gnergic” cells experiencing themselves! And what does the macroscopic expression of gnergy -- the human body -- find when it interrogates itself? If we accept Merleau-Ponty’s descriptions (and we do), we find an incessant “dehiscence,” or “fission,” of our Flesh’s mass (C), into the complementary poles of percipience (A) and perceptibility (B). As such, we have a macroscopic and fully experiential analogue to the molecular biologist’s inferential encounter of gnergy (C) as it “ontologically transduces” itself into the complementary poles of energy (A) and information (B)! Ji’s gnergy and Merleau-Ponty’s Flesh are thereby synonyms for the same thing: Life, with the profound difference that Ji’s gnergy is life viewing itself from without -- a mass of cells consolidated in a scientist viewing a mass of cells in another body -- whereas Merleau-Ponty’s Flesh is Life viewing itself from within -- a mass of cells interrogating themselves.
We can thereby conclude that insofar as Ji's energy has no direct experiential ground in molecular biology and insofar as Merleau-Ponty's Flesh provides just such a direct experience Merleau-Ponty's and Ji's philosophies, again, can be considered mutually affirming, or, complementary.

This exposition has sought to reveal a hitherto unprecedented convergence of complementarity and phenomenology, natural science and philosophy, in the "complementary" relationship manifesting itself between Merleau-Ponty's ontology of the Flesh and Sungchul Ji's biology-based philosophical framework known as complementarism.
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