Ecological Intentionality and the Metaphysics of Living Form

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I. A Particular Organism

The black walnut in our backyard (*Juglans nigra*) has been leafing out for about two weeks now, and whatever is happening in those branch tips is not easy to describe without either flattening it into chemistry or overstating it into something the available vocabulary cannot support. Compound leaves emerge from dormancy in a recognizable sequence, each leaflet unfurling along a gradient that runs from the stem outward, the whole structure asserting itself into the available light without waiting for external instruction. Watching it across several seasons, what builds is not primarily botanical information, though there is that too, but something more like an impression of directed presence, a sense that the tree is doing something rather than undergoing something, that its growth issues from an interiority rather than being imposed upon a passive substrate from without. That impression is the problem this paper tries to take seriously.

Phenomenology has always insisted that the place to begin is not with a theory but with what is actually given, with the phenomenon as it presents itself before abstraction has done its work. Maurice Merleau-Ponty's *Phenomenology of Perception* begins in precisely this spirit, with the observation that philosophical attention requires suspending our habitual certitudes

about the world not in order to deny them but in order to make them strange enough to examine, to see what the world actually is "prior to any thematization."[1] The body, for Merleau-Ponty, is not an instrument the mind uses to navigate a pre-given environment but the original medium of our orientation toward it, the site where meaning is first enacted before it is represented or reflected upon.[2] What this means for the encounter with the black walnut is something that unfolds slowly in the watching. If my own perception is already a kind of motor engagement with the world before it is a mental act, then the walnut's mode of growth and self-organization might be something more than an external process I observe from a safe epistemological distance. It might be a form of engagement that answers to my perception, not identically, not symmetrically, but as something present and oriented rather than overly complex.

The question is whether that answering presence can be philosophically grounded rather than asserted. The dominant tendency in Western philosophy has been to collapse the organism into mechanism and to relocate all interiority within the human observer, a move with consequences not only for how we theorize living form but also for how we inhabit and treat the world alongside other organisms. This paper argues that intentionality need not be restricted to human consciousness but can be understood as a structural feature of living form itself. Drawing on Henri Bergson's account of duration as the temporal condition of interiority, Raymond Ruyer's concept of absolute survey as its formal condition, and Edith Stein's phenomenology of empathy as a methodological bridge, I develop what I call Ecological Intentionality as a framework in which non-human organisms are understood as bearers of, though non-reflective,

[1]Maurice Merleau-Ponty, *Phenomenology of Perception*, trans. Donald A. Landes (London: Routledge, 2012), lxxvii.
[2]Ibid., 84–97.

interiority. Maurice Merleau-Ponty's phenomenology of embodiment and his later ontology of the flesh provide the connective ground on which this convergence becomes intelligible.

Merleau-Ponty runs through this paper as its connective tissue, because it is Merleau-Ponty who demonstrates most carefully that intentionality belongs to the body's pre-reflective orientation toward its world before it belongs to any conscious act, and from that demonstration, the possibility of a non-human intentionality begins to open.[3] His later work, especially *The Visible and the Invisible*, pushes further still, toward a vision of perception as participation in a flesh that is neither exclusively mine nor the world's, a fabric of reversibility in which the boundary between perceiver and perceived is itself a site of meaning rather than a wall between subjects and objects.[4]

II. The Problem: Intentionality's Inherited Limits

The concept of intentionality enters modern philosophy through Franz Brentano's 1874 *Psychology from an Empirical Standpoint*, where he proposes it as the distinguishing mark of mental phenomena: every mental act is directed toward an object, and this directedness separates the mental from the physical.[5] Edmund Husserl refines this formulation into an entire architecture of consciousness in which the perceiving subject constitutes meaning through intentional directedness toward a world of objects.[6] The structure is elegant and, in many

[3]Merleau-Ponty, *Phenomenology of Perception*, 127–147.
[4]Maurice Merleau-Ponty, *The Visible and the Invisible*, trans. Alphonso Lingis (Evanston: Northwestern University Press, 1968), 130–155.
[5]Franz Brentano, *Psychology from an Empirical Standpoint*, trans. Antos C. Rancurello, D. B. Terrell, and Linda L. McAlister (London: Routledge, 1995), 88–89. The formulation of intentional inexistence as the mark of the mental appears in Book Two, Chapter 1.
[6]Edmund Husserl, *Ideas Pertaining to a Pure Phenomenology and to a Phenomenological Philosophy, First Book*, trans. F. Kersten (Dordrecht: Kluwer, 1983), 199–215.

respects, irreplaceable, but it imposes a constraint this paper treats as a diagnostic problem rather than a fatal flaw: intentionality, in this original framing, is a property of consciousness, and consciousness, however carefully described, is assumed to be a human endowment. The organism in the field, the tree organizing its growth from within, the watershed conducting its drainage over centuries… none of these, on the classical account, are bearers of interiority. They are objects toward which conscious subjects direct their attention, not subjects orienting themselves toward a world of their own.

Maurice Merleau-Ponty begins to dismantle this constraint, though the dismantling is gradual and, in some respects, incomplete. In *The Structure of Behavior*, he argues that animal behavior cannot be adequately described as a sequence of reflex responses to discrete physical stimuli. What organisms respond to are not isolated signals but structures, organized wholes that have meaning within the context of the organism's situation, and the capacity to respond to structure rather than to cause already implies something that the mechanistic vocabulary cannot accommodate.[7] By the time of the *Phenomenology of Perception*, this argument has deepened into a full account of embodied intentionality: the living body is not a machine housed in an environment but a field of orientation, directed toward the world through habitual motor engagements that constitute meaning before any conscious act of reflection.[8] Intentionality, on this account, is no longer a property of a disembodied mental act but a feature of the body's pre-reflective situatedness, and that shift begins to open the possibility that other living bodies might also be oriented, directed, and situated in ways that merit the same description. Jakob von Uexküll's concept of the *Umwelt* takes this possibility seriously at the level of animal behavior,

[7]Maurice Merleau-Ponty, *The Structure of Behavior*, trans. Alden L. Fisher (Boston: Beacon Press, 1963), 125–148. The argument against the reflex arc model and toward a structural account of behavior runs through Part Three.
[8]Merleau-Ponty, *Phenomenology of Perception*, 127–147. The motor arc and the account of motor intentionality as a mode of bodily orientation prior to conscious representation.

arguing that each organism inhabits not a shared objective environment but a species-specific world constituted by its own carriers of significance, an advance over mechanism that Merleau-Ponty engages directly in his Collège de France lectures on nature.[9]

Yet, something remains unresolved, and this is a critical gap. Both Uexküll's *Umwelt* theory and Merleau-Ponty's embodied intentionality describe the relation between a living organism and its environment, the way behavior is organized, and the way meaning is enacted at the levels of perception and response. What neither completely accounts for is the deeper question of how the living form itself is constituted as purposive, how the organism comes to be the kind of thing that can have an *Umwelt* at all, how form and finality belong together at a level prior to behavior and environment. To answer that question, intentionality must be traced not only to the body's orientation toward its world but to the structure of living form as such.

What remains unresolved, then, is not whether organisms are meaningfully related to their environments, but how the organism itself comes to be the kind of entity for which such relations are possible. The question is no longer only about behavior or perception, but about the constitution of living form as such.

III. Bergson: Duration as the Condition of Living Interiority

The standard objection to vitalism is that it smuggles an unexplained force into biology wherever mechanism runs out of explanatory resources, that it names a mystery without illuminating it. Henri Bergson was aware of this objection and tried to answer it not by defending a mysterious vital substance but by diagnosing the mechanism that distorts time. The argument of *Creative*

[9]Jakob von Uexküll, *A Foray into the Worlds of Animals and Humans*, trans. Joseph D. O'Neil (Minneapolis: University of Minnesota Press, 2010), 42–52; Maurice Merleau-Ponty, *Nature: Course Notes from the Collège de France*, trans. Robert Vallier (Evanston: Northwestern University Press, 2003), 167–178.

Evolution is not, at its core, a biological claim, but a philosophical claim about the nature of temporality and what follows from taking it seriously. A living organism is not a mechanism, not primarily because it is made of different stuff, but because it exists in a different mode of time, one that cannot be represented as a series of instantaneous states spread out along a line without losing precisely what makes it alive.[10]

Bergson calls this mode of time *durée*, duration, and its essential character is continuity. Duration is not a sequence of discrete moments strung together by memory or causation but an indivisible flow in which past and present interpenetrate, in which the whole of what has been carries forward into what is becoming without remainder.[11] A melody, he suggests, is the most accessible illustration of this point since, if heard as a sequence of separate notes, it ceases to be a melody and becomes a collection of sounds. What makes it a melody is that no note is ever fully past while the melody continues, that each moment of the music is what it is only within the living continuity of the whole.[12] The organism, Bergson argues, exists in exactly this way. Its present state is not the result of prior states acting on it from outside but the continuation of a process that has been running since before the individual organism existed, a temporal momentum that is not mechanically determined because it is creative and open to what has not yet been.

Duration establishes interiority as temporal before it is psychological. A being that exists in this mode of continuity does not pass through time but holds itself together through it. The

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[10]Henri Bergson, *Creative Evolution*, trans. Arthur Mitchell (New York: Henry Holt, 1911), 1–15. The opening pages establish the argument about life and duration before the biological account begins; the distinction between duration and spatialized time runs through the entire work but is most concentrated here.

[11]Ibid., 2–7. The description of duration as continuous interpenetration of states rather than a sequence of discrete moments.

[12]Henri Bergson, *Time and Free Will: An Essay on the Immediate Data of Consciousness*, trans. F. L. Pogson (London: George Allen and Unwin, 1910), 100–104. The melody example is more fully developed here than in *Creative Evolution*.

critique of mechanism follows directly from this. Mechanism, as Bergson analyzes it, is not wrong about matter, but rather it is wrong about time. When a mechanism attempts to explain a living process by decomposing it into its constituent parts and tracing the causal relations among them, it substitutes a spatial representation for a temporal one. It spreads the organism out as though all its states were simultaneously available for inspection, as though the future were already implicit in the present arrangement of parts, waiting only to be unfolded.[13] But this is precisely what duration resists. The *élan vital*, that phrase which has attracted so much misunderstanding, is not a mystical substance animating inert matter from within. It is Bergson's name for the way life refuses to be read backward from its terminus, the way a living process is always already in excess of whatever static description can be given of it at any moment.[14] To say that an organism has an *élan vital* is to say that its form is constituted by a temporal process that cannot be adequately represented as a configuration of parts, that living form is irreducibly historical in a sense that mechanical form is not.

Bergson does not argue that duration immediately entails consciousness in any rich sense. What he argues is that duration is the condition of possibility for any interiority, that a being existing in continuous temporal flow rather than in a series of discrete instants has, at minimum, a kind of self-relation, a way of carrying its past into its present that is not additive but formative of what it is.[15] The organism does not have a history in the way a rock accumulates wear since it is its history in a more intimate sense, constituted by a temporal continuity that reaches all the way down into the cellular and biochemical processes through which it maintains itself. Merleau-

[13]Bergson, *Creative Evolution*, 6–12. The critique of the cinematographic method of the intellect and the spatializing tendency of mechanism.
[14]Ibid., 87–97. The introduction of the élan vital and its relationship to the diverging directions of evolution. Bergson is careful to distinguish the élan vital from a substantive vital force; it names a momentum or tendency rather than a thing.
[15]Ibid., 1–5. The argument that duration implies a self-relation, that a being in duration carries its past forward as a formative presence rather than as a dead weight.

Ponty inherits this insight about the irreducibility of lived time, arguing in the *Phenomenology of Perception* that time is not a container in which experiences occur but the very structure of subjectivity, the way the living body holds retention and anticipation together in a single oriented present.[16] Both insist that the living organism is not a thing that happens to be in time but a thing that is temporal through and through, whose interiority is structured by duration before it is structured by anything else.

Duration establishes the condition that only a being existing in temporal flow can have the kind of self-relation interiority requires. But the question of how living form is structured as purposive, how the organism's temporal existence is organized toward its own continuation and expression rather than simply flowing through it, requires a further account. If Bergson shows why living beings cannot be understood through spatialized accounts of time, the question remains: how does their unity hold together as a form rather than dispersing into process alone?

IV. Ruyer: Absolute Survey and the Self-Referential Form

One of the persistent difficulties in any philosophy of living form is explaining how the organism gets to be itself through development rather than by assembly. A machine can be understood by decomposing it into parts and tracing how each part contributes its function to the whole, because the machine's unity is, in the relevant sense, external. The parts retain their identity independently of the whole they compose, and the whole is constituted by their spatial arrangement rather than by any organizing principle immanent to itself. The embryo developing into a frog cannot be understood in this way without losing what is most essential to it. Its

[16]Merleau-Ponty, *Phenomenology of Perception*, 430–466. Part Three, Chapter 2, "Temporality." The argument that time is the structure of subjectivity rather than a container for experience, and the critique of both empiricist and intellectualist accounts of time.

development is oriented from within toward a form it is not yet but is already, in some sense, becoming, and the unity of the frog is not the sum of its cellular parts any more than a melody is the sum of its notes. Bergson's account of duration establishes the temporal condition for this kind of interiority, but it leaves open a further question: how living form is structured as purposive, and how the organism's formal unity constitutes itself as self-organizing rather than self-perpetuating.

Ruyer's central concept, absolute survey (*survol absolu*), begins from a distinction between two fundamentally different modes of unity. Spatial survey, the kind of cartographer exercises when looking down at a map from above, requires an external viewpoint. The surveyor is distinct from the surveyed domain, and the unity the surveyor perceives belongs to the representation rather than to the terrain itself.[17] Absolute survey names something entirely different: a domain that surveys itself without any point of view external to it, in which the surveyor and the surveyed are one and the same. Living form, Ruyer argues, is constituted by absolute survey in precisely this sense. The organism does not have a unity imposed upon it from without by an external organizer. It *is* its own organizing act, holding its form together through a self-referential activity that has no spatial location within the organism because it is not a spatial relation at all.[18] This is a difficult concept, because the entire vocabulary of visual inspection and cognitive representation pushes toward a spatial reading, toward imagining some organizing center somewhere inside the cell directing its own biochemistry. Ruyer is insisting that absolute survey is categorically different from any such image, that it names the mode of being of a form that is its own unity rather than a collection of parts that happens to cohere. The importance of

[17]Raymond Ruyer, *Neofinalism*, trans. Alyosha Edlebi (Minneapolis: University of Minnesota Press, 2012), 7–18. The distinction between spatial survey and absolute survey is established in the opening chapters.
[18]Ibid., 19–34. The account of absolute survey as a self-referential domain constituting its own unity without an external organizing principle.

this claim is that interiority is no longer something added to an already constituted organism, but is identical with the way that organism holds itself together as a unity.

The implications for morphogenesis are considerable. In *The Genesis of Living Forms*, Ruyer extends this account into a detailed engagement with the problem of biological development, arguing that the formation of a living organism cannot be explained by any sequence of local causal interactions among its components, however intricate that sequence might be.[19] The developing embryo is not a system in which each cell responds mechanically to chemical signals from its neighbors, because such a system could never produce the global coordination that actual morphogenesis requires. What the organism requires, and what Ruyer provides, is a principle of formal causality that operates at the level of the whole throughout the developmental process, not as an external designer directing the parts from outside but as the immanent orientation of the form toward its own completion.[20] Primary consciousness, on Ruyer's account, is not a property added to a living form that has already been constituted by other means, but is coextensive with self-survey, the mode of being of any domain that organizes itself from within toward its own formal unity.[21] To say that an organism has primary consciousness in Ruyer's sense is not to attribute to it anything like human self-awareness; it is to say that its existence is self-referential in the precise structural sense that absolute survey describes.

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[19]Raymond Ruyer, *The Genesis of Living Forms*, trans. Jon Roffe and Nicholas Munn (Lanham: Rowman & Littlefield, 2020), 45–68. The argument against purely local-causal accounts of morphogenesis and toward a principle of immanent formal causality operating at the level of the developmental whole.

[20]Ibid., 70–88. The embryo's development as an instance of global formal coordination irreducible to the sequential interaction of its parts, and the concept of immanent finality as distinct from both external design and blind mechanism.

[21]Ruyer, *Neofinalism*, 38–52. The claim that primary consciousness is coextensive with self-survey, not a property added to living form but identical with its mode of self-referential organization.

Where Bergson insists that the organism cannot be understood as a mechanism because it exists in duration rather than in spatialized time, Ruyer insists that it cannot be understood as a mechanism because its formal unity is constituted by absolute survey rather than by spatial assembly. Both reject the same underlying error: the substitution of a static and external representation for a dynamic and internal process, Bergson from the side of temporality and Ruyer from the side of form. Duration is the temporal condition of living interiority; absolute survey is its formal condition, and neither is fully sufficient without the other.[22]

Merleau-Ponty's later ontology moves, from a different direction, toward a structural parallel with Ruyer's absolute survey. In *The Visible and the Invisible*, the concept of flesh (*la chair*) names precisely the kind of self-referential domain that Ruyer describes. The hand that touches can be touched, the eye that sees is part of the visible, and this reversibility points to something ontologically fundamental about the mode of being of living form in the world.[23] What Merleau-Ponty calls the chiasm, the intertwining of the sensing body with the sensed world, is a version of the self-referential structure that Ruyer's absolute survey names at the level of living form itself. The two accounts are not identical, and it would be a mistake to collapse them. Ruyer is making a claim about the constitution of living form as such; Merleau-Ponty is making a claim about the structure of perception and its world. But the structural parallel runs deep enough to be significant, because both describe how a living domain is not located in the world as an object among objects but is folded back upon itself in a way that constitutes interiority. That interiority, temporal in Bergson's sense, formally self-referential in Ruyer's, and embodied and perceptual in Merleau-Ponty's, is at the heart of Ecological Intentionality.

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[22]Bergson, *Creative Evolution*, 7–15. The temporal argument against mechanism, which the Ruyerian formal argument supplements without replacing.

[23]Merleau-Ponty, *The Visible and the Invisible*, 130–155. "The Intertwining — The Chiasm," where the reversibility of flesh is developed as an ontological rather than just a phenomenological claim.

To claim that non-human organisms participate in intentionality in this sense is not to claim that the black walnut deliberates about its growth or that the Tyger River watershed chooses its drainage patterns. It is to claim something more precise and more demanding: that the formal self-organization through which a living system constitutes and maintains itself is not only a complex mechanism but a self-survey, and that the organism is always already oriented toward its own form in a way that exceeds what any external description can capture. This orientation is a legitimate candidate for what we have been calling interiority. The remaining question is methodological. If non-human organisms have interiority of this kind, how does the claim escape the charge of projection, of reading human consciousness outward into a world that just reflects it back?

V. Stein: Empathy as Methodological Bridge

The charge of projection is the most persistent and, in some respects, the most legitimate objection to any philosophy of non-human interiority. If we attribute purposive interiority to the black walnut or the watershed, the objection runs, we are not perceiving anything that actually belongs to those organisms; we are reading our own inner life outward into a world that has no inner life of its own, mistaking the texture of our imagination for the structure of reality.

The objection has a long history in philosophy of mind and of science, and it cannot be answered simply by insisting that the attribution feels right or that it produces a more ecologically sensitive ethics. What is needed is a rigorous account of how one subject can achieve cognitive access to another's experience, an account that preserves the alterity of the other rather than dissolving it into a projection of the self, and that can be extended, with appropriate modifications, to the encounter with non-human living forms. Edith Stein's

phenomenology of empathy, developed in her 1917 dissertation *On the Problem of Empathy*, provides exactly this account, and it is for this reason that it functions in the present argument as a methodological bridge between the metaphysical claims of sections III and IV and the fuller account of Ecological Intentionality that follows.

Stein begins by distinguishing empathy from several acts that are frequently confused with it. Emotional contagion (*Gefühlsansteckung*) is the involuntary catching of another's feeling; it does not give the other's experience as the other's but absorbs it unreflectively into one's own.[24] Fellow-feeling (*Mitgefühl*) is closer, involving an orientation toward another's situation, but it is characterized by a kind of parallelism, by feeling the same thing alongside the other rather than perceiving the other's feeling as the other's.[25] Empathy, properly understood, is neither of these. It is an intentional act, in the full phenomenological sense, directed toward another's experience as *theirs*, as something given in its own mode of being rather than appropriated into or duplicated within my own.[26] The structure Stein describes has three moments: the primordial emergence of the foreign experience as something present to attention, the fulfilled intentional transgression toward it in which one inhabits, however partially and asymmetrically, the other's experiential standpoint, and the return to one's own standpoint enriched by what the encounter has disclosed, aware now of both the distance traversed and the distance that remains.[27] The crucial point is that in empathy, the other's experience is held as the

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[24]Edith Stein, *On the Problem of Empathy*, trans. Waltraut Stein (Washington, D.C.: ICS Publications, 1989), 10–14. The distinction between empathy and emotional contagion, where the latter is characterized by the involuntary absorption of another's feeling into one's own rather than its givenness as the other's.

[25]Ibid., 14–18. The distinction between empathy and fellow-feeling, where the latter involves a orientation toward another's situation but a parallelism of feeling rather than perceptual access to the other's experience as such.

[26]Ibid., 6–10. Stein's initial positive characterization of empathy as an intentional act directed toward another's experience in its own mode of being, prior to the detailed analysis.

[27]Ibid., 18–26. The three-moment structure of empathic experience: primordial emergence, fulfilled intentional transgression, and return to one's own standpoint. This is among the most carefully argued passages of the dissertation and worth following closely in the original.

other's throughout, that the act reaches without absorbing, that it achieves cognitive access without dissolving the alterity that made the access meaningful in the first place.

What makes Stein's account methodologically powerful for the purposes of this paper is the rigor with which she insists that empathy is a form of *perception* rather than a form of inference or imagination. I do not perceive another's pain by inferring it from their behavior, as though I were a scientist reasoning from observable evidence to an unobservable cause, nor do I perceive it by imagining what I would feel in their situation, as though the other's experience were simply a hypothetical variant of my own. I perceive it directly, in a mode that is intentional, directed toward the other's actual experience rather than toward a representation of it that I have produced.[28] This does not mean that empathic perception is infallible or that it carries the same evidential weight as the immediate givenness of one's own experience. Stein is clear that empathy achieves a secondary and non-primordial givenness, a real but mediated access to what is originally given only to the other.[29] But the mediation does not collapse into projection because the act remains directed outward, oriented toward what the other's form of life actually discloses rather than toward what I want or expect it to disclose. The distinction between empathic perception and projection, on this account, is not a matter of subjective sincerity but of phenomenological structure as projection fills the other with one's own content, while empathy maintains the orientation toward the other's own givenness even where that givenness is partial, difficult, and resistant to full appropriation. The distinction is decisive for the present argument, because it establishes that access to another's interiority need not collapse into projection so long as the intentional structure of the act remains oriented toward the other as other.

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[28]Ibid., 22–30. The claim that empathy is a form of perception rather than inference or imaginative projection, and the phenomenological grounds for distinguishing empathic access from its substitutes.

[29]Ibid., 10–11. Stein's account of the secondary and non-primordial character of empathic givenness, which is real and intentionally directed but not identical in evidential weight to the immediate givenness of one's own experience.

Merleau-Ponty's account of the other's body converges with Stein's at a crucial point, though arriving from a different direction. My body is given to me not as a mental interior expressing itself in a visible exterior but as a lived motor engagement with the world, a schema of possible actions and orientations, and when I perceive another body, I perceive it as a variant of that same engagement, a lived orientation that answers to mine without being identical to it.[30] What Merleau-Ponty calls intercorporeality names the way the boundaries of the lived body are zones of exchange rather than sealed walls: the flesh I inhabit is already, at a level prior to reflection, in contact with the flesh of the world.[31] The chiasm that Merleau-Ponty describes in *The Visible and the Invisible* is what makes empathic perception ontologically possible, not because I extend my awareness toward the other, but because the structure of embodied being itself is already characterized by the self-referential reversibility that makes another's interiority, in principle, available to perception.

The ecological application of this framework requires one further step, a step neither Stein nor Merleau-Ponty explicitly takes, though both provide the resources for it. If empathy is a form of intentional perception directed toward another's experiential life, and if the account of living form developed through Bergson and Ruyer establishes that organisms participate in interiority through duration and absolute survey, then the perception of a non-human organism's interiority is not categorically different from the perception of another human's interiority. It is different in degree, in the density and accessibility of the givenness, in the distance between one's own form of life and the organism's mode of self-survey… but it is not different in *kind*.

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[30]Merleau-Ponty, *Phenomenology of Perception*, 368–385. The section on the lived body and the account of how perception of another embodied being proceeds through corporeal recognition rather than inference.

[31]Merleau-Ponty, *The Visible and the Invisible*, 138–142. The account of intercorporeality as a structural feature of the flesh of the world, rather than a secondary achievement of individual subjects who first exist separately and then communicate.

The black walnut's self-organizing activity, understood as the expression of a form constituted by absolute survey and inhabited by duration, discloses something to careful perception that is there rather than just imagined, and the act of attending to that disclosure follows the structure of empathy rather than the structure of projection. What this means in practice is that the ecological attentiveness that indigenous knowledge traditions, contemplative naturalists, and phenomenologically minded ecologists have cultivated and described is not a form of sentimentality to be tolerated alongside the real work of ecological science but a mode of cognitive access to the living world, one that answers to the actual structure of living form.[32] Ecological Intentionality is this mode of attending.

VI. Ecological Intentionality: The Convergence

Bergson, Ruyer, and Stein are not natural companions in the history of philosophy. They worked in different traditions, addressed different problems, and would not have described themselves as contributing to a common project. What draws them into conversation here is not the imposition of a framework from outside but the pressure of the problem itself: how to give a philosophically rigorous account of non-human interiority that is neither reductively mechanistic nor naïvely anthropomorphic, and that provides methodological resources for the kind of attentiveness that ecological relation requires.

Merleau-Ponty is the connective tissue that holds all three strands together as a single coherent account. His embodied intentionality shows that intentionality belongs to the body's

[32]Robin Wall Kimmerer, *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge, and the Teachings of Plants* (Minneapolis: Milkweed Editions, 2013), 48–59. Kimmerer's account of the grammar of animacy and of attending to plant life as expressive provides a non-reductive illustration of what empathic ecological perception looks like in practice, grounded in sustained observation rather than in theoretical imposition.

pre-reflective orientation toward the world before it belongs to any conscious act, and that the body's mode of being is already a kind of self-survey, a held orientation toward possible actions and perceptions that constitutes the organism's world rather than only inhabiting it.[33] His intercorporeality shows that the boundaries between one embodied being and another are zones of exchange rather than sealed walls, that the flesh of the world is already, at a level prior to any individual act of perception, characterized by the reversibility and mutual implication that makes empathic access possible.[34] His later ontology of the chiasm shows that the self-referential structure Ruyer names as absolute survey is not a peculiarity of biological form but a feature of the flesh of the world itself, in which being is characterized by this folding-back-upon-itself at every level.[35] And his account of temporality shows that the Bergsonian insight about duration is not simply a claim about biological processes, but a claim about the structure of all embodied experience, that to be alive and embodied is already to be in duration in the relevant sense. Merleau-Ponty does not replace any of the other three figures, but provides the phenomenological ground on which their contributions make sense together, the account of embodied being-in-the-world within which Bergson's temporal argument, Ruyer's formal argument, and Stein's methodological argument find their proper places and mutual implications.[36]

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[33]Merleau-Ponty, *Phenomenology of Perception*, 127–147. Motor intentionality and the body's pre-reflective orientation toward its world as the original site of meaning, prior to any conscious act of representation.
[34]Merleau-Ponty, *The Visible and the Invisible*, 138–142. Intercorporeality and the flesh of the world as the ontological ground of empathic access, describing a mode of mutual implication that precedes and makes possible any individual act of perception.
[35]Ibid., 130–155. The chiasm as a structural feature of being itself rather than of individual embodied experience only, parallel in its self-referential character to what Ruyer names as absolute survey.
[36]Merleau-Ponty, *Nature: Course Notes from the Collège de France*, trans. Robert Vallier (Evanston: Northwestern University Press, 2003), 43–56, 167–178. The Nature lectures show Merleau-Ponty explicitly engaging with the philosophy of life, with Bergson and Uexküll, in a way that connects the phenomenological and biological dimensions of the account.

Ecological Intentionality names the mode of attending to the living world that answers to the actual structure of life itself. It is not a metaphor borrowed from human psychology and applied, with varying degrees of apologetic qualification, to organisms that cannot really sustain it. This is a description of what perception must become if it is to receive what living form discloses. An organism constituted by duration and organized through absolute survey is not a mechanism that happens to exhibit complex behavior, but a bearer of interiority, a form that holds itself together through self-referential activity, that carries its past forward into its present, and that orients itself toward its own form of life in a way that exceeds any external description. The perception that is adequate to such an organism is not the detached observation of a subject examining an object from a position of epistemological safety but the empathic attentiveness that Stein describes and that Merleau-Ponty's intercorporeality grounds ontologically, a reaching toward the other's actual interiority that is disciplined precisely by its orientation toward what is there rather than toward what is convenient to imagine.

If ecological crisis is, in significant part, a crisis of how human beings perceive and relate to the living world, then what is required is not primarily a new set of managerial policies for governing natural systems from outside but a transformation of the perceptual habits through which the living world is encountered in the first place. A mechanistic worldview does not license the exploitation of ecosystems, but makes the perception of ecological relation, in the full sense the preceding argument develops, structurally impossible, because it has already decided in advance that there is nothing there to perceive beyond the interaction of inert parts. Ecological Intentionality names both the structure of what is actually there, a world of organisms bearing interiority, organized by duration and absolute survey, available to empathic perception, and the mode of attending that is adequate to it. Practical transformation that is not grounded in a

changed perception of what the living world actually is will always tend, under pressure, to revert to the managerial posture it means to supersede. A mechanistic ontology does not simply fail to adequately describe living systems; it forecloses, in advance, the possibility that there is anything beyond interaction to perceive, and, in doing so, shapes the conditions under which ecological degradation becomes thinkable and actionable.

VII. Closing: The Organism Again

The black walnut is still there. It continues to organize its growth from within, to carry its history forward into its present, to assert its form into the available light with no concern for whether the observer standing at the yard's edge has arrived at an adequate account of what that assertion means. What has changed, or what the argument has been trying to change, is the quality of the standing and the watching, the perceptual posture with which the encounter is approached, and whether the interiority that sustained attention discloses in the tree's activity is received as something there or quietly filed under the heading of the observer's own sentiment.

In *Phenomenology of Perception*, Merleau-Ponty describes how a blind man's cane ceases, with practice, to be an object the hand manipulates and becomes instead an extension of the body's own motor arc, a zone of contact with the world that is experienced not as a tool interposed between subject and environment but as the live edge of embodied perception itself.[37] The passage is most often read as an illustration of habit and motor schema, and it is that, but it is also something more. It is a description of what perception looks like when the boundary between the perceiving body and the world it inhabits becomes porous enough for contact to

[37]Merleau-Ponty, *Phenomenology of Perception*, 144–145. The blind man's cane as an extension of the body schema, illustrating how habitual motor engagement transforms an object into a zone of perceptual contact rather than an interposed instrument.

occur, when the distinction between the felt and the feeling, the sensed and the sensing, softens without collapsing entirely. Using Bergson's duration, Ruyer's absolute survey, and Stein's phenomenology of empathy, something structurally analogous to this porosity is possible in the encounter with non-human living form, that the boundary between the human perceiver and the organism perceived is not a wall but a zone of potential contact, and that what comes through that zone, when attention is patient and disciplined enough to receive it, is not projection but disclosure.

The Piedmont of South Carolina, with the watershed of Lawson's Fork Creek draining through the Griffin Nature Preserve toward the Pacolet and eventually the Broad and to the Atlantic, is a living system constituted by interiority: organisms organized through absolute survey, inhabiting duration, oriented toward their own forms of life in ways that exceed any description of them as solely complex mechanisms responding to environmental stimuli. The data center buildouts now spreading across this landscape, drawing from the same aquifer and the same electrical grid that sustain the creek's shoals and the walnut's root system, do not represent a failure of environmental management in the first instance, though they are that too. They represent a failure of perception, a trained incapacity to receive what the living system actually discloses, a habitual reduction of the watershed's interiority to a resource available for extraction and throughput because the conceptual vocabulary in place has already decided, in advance, that there is no interiority there to encounter.[38] Ecological Intentionality is an alternative, not as an ethical program imposed from outside the perceptual situation, but as a

[38]Sam Harrelson, "Attention as Ecological Practice: AI Data Centers and the Limits of the Anthropocene," unpublished seminar paper, California Institute of Integral Studies, 2025, drawing on Yves Citton, *The Ecology of Attention*, trans. Barnaby Norman (Cambridge: Polity Press, 2017), and on Merleau-Ponty's account of embodied perception.

description of what perception itself must become if it is to answer honestly to what the living world actually is.

This is not a claim that philosophy alone can repair what has been broken in the human relationship to the living world. It is a claim that the repair, whatever form it takes practically and politically, must pass through a transformation of perception rather than only a revision of policy, because policy that is not grounded in a changed way of seeing will always tend, under pressure, to revert to the managerial posture it nominally opposes.

The compound leaves of the walnut are fully extended at this point in the yearly cycle. The sequence of their unfolding has run its course for this season, and what remains is the full expression of the form that was always already orienting that unfolding, the form that absolute survey constituted, that duration carried forward, and that patient attention, structured by something like Stein's empathy, can receive rather than singularly projecting. The argument that the tree has something at stake in its own existence, that its self-organizing activity is not a mechanical process but an expression of interiority, is not the conclusion of a sentimental naturalism uncomfortable with the rigors of biological science. It is the conclusion of a phenomenological and metaphysical argument that takes those rigors seriously while insisting that they do not exhaust what is given in the encounter with living form… that there is more there than mechanism can see, and that learning to see it is not a luxury for ecological ethics but its precondition.

What Merleau-Ponty called the flesh of the world is not a poetic phrase for a world without structure. It is an attempt to name the mode of being of a reality that is already, prior to any human act of perception, characterized by the kind of self-referential reversibility, the folding back of the sensing upon the sensed, that makes encounter possible. The black walnut,

the watershed, the shoals of Lawson's Fork conducting the Piedmont's slow geological argument with gravity and time… these are not backdrops for human experience but participants in the same flesh, bearers of their own interiority, carrying their own histories forward into presents that are not reducible to ours. To perceive them as such is what Ecological Intentionality requires, and what the convergence of Bergson, Ruyer, Stein, and Merleau-Ponty, read carefully and in proximity to the actual living world, makes philosophically available.[39]

[39]Merleau-Ponty, *The Visible and the Invisible*, 130–155. The flesh of the world as the ontological ground of the argument's closing movement, the mode of being of a reality already characterized by the reversibility and mutual implication that makes ecological encounter possible rather than imaginable.

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