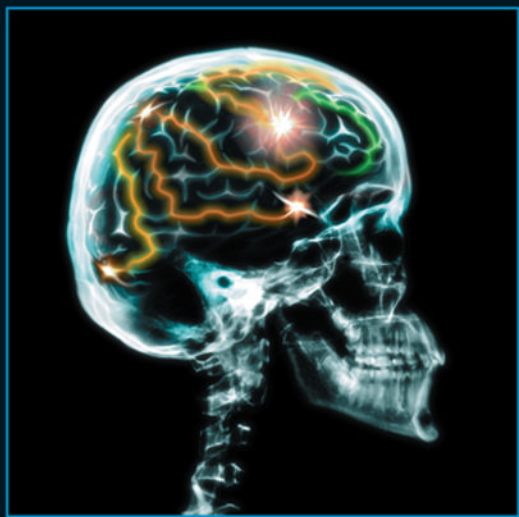


THE LIVING MIND

From Psyche to Consciousness



RICHARD DIEN WINFIELD

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RICHARD DIEN WINFIELD

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Chapter 2 expands upon and incorporates arguments that I first presented in a paper, “Hegel, Mind, and Mechanism: Why Machines Have No Psyche, Consciousness, or Intelligence,” delivered at the 29th Annual Conference of the Hegel Society of Great Britain on September 2, 2008, and published in the *Bulletin of the Hegel Society of Great Britain* 59–60 (2009): 1–18.

Chapter 9 expands upon and incorporates arguments earlier presented in an essay, “Self-Consciousness and Intersubjectivity,” published in *The Review of Metaphysics* 59, no. 4 (June 2006): 757–79.

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Introduction

Nothing seems more accessible than mind, whose essential subjectivity always reveals mind to itself. Whether feeling its own feeling, consciously confronting objects through its representations, or thinking its own thoughts, mind has its distinctive character in virtue of how it apprehends itself. This pervasive reflexivity, however, has become inconceivable to a prevailing thinking accustomed to conceiving the world to be governed by laws of matter rendering objectivity a mechanism with no place for subjectivity. Consequently, the philosophy of mind finds itself plagued by daunting dilemmas paralyzing reason's quest to comprehend mental reality. These dilemmas arise from three prevalent approaches whose limits must be understood and surmounted to allow for any viable philosophy of mental life.

First, since Descartes, thinkers have largely preoccupied themselves with a mind/body dualism opposing mental to physical reality. Conceiving material things as mechanisms devoid of self-activity and determined wholly from without, these theorists have had to seek mind beyond sensible existence. Their ensuing dualism construes mind as a ghost in a machine, opposing two ontologically incommensurate substances. On the one hand, there is mind—immaterial, indivisible, and self-active. On the other hand, there is the body—material, divisible, and mechanistically determined. Given the resulting incongruence, any relation between mind and body or mind and world becomes unfathomable. How can mind affect the body or the body affect the mind if both are fundamentally alien in composition, form, and process? And if mind and body cannot be intelligibly connected, how can mind apprehend the world or make the world its home and leave any trace upon it? And if mind cannot transform the world or be impinged by it in turn, how can mind escape the soliloquy of meditation to discourse with any other thinking selves?

For those who cannot relinquish the assumption that nature is a causally determined mechanism, these problems have fostered mechanical, neurological, and computational reductions of mind that privilege a physical reality devoid of subjectivity, leaving no place for the very mental features to be explained. Although such material reduction purports to leave dualism behind, it retains the divide by embracing the one side of physical mechanism and excluding everything distinctly mental as at best illusory “epiphenomena.” Yet how can the excluded epiphenomena of mind be explained away? Just acknowledging them requires ascribing to matter, brain, or computation a power to generate illusion for which physics, neurology, and calculation can offer no explanation. Unlike any other “effect,” the mental phenomena somehow arise from material process without requiring any extra effort to produce them. Nor do the epiphenomena cause any further movements in the chain of mechanical necessity, as does every other bona fide effect.¹ Moreover, how can there be any theoretical knowledge about the exclusive reality of material process if the spontaneous reflexivity of intelligence is denied any existence of its own?

Second, even when the futility of the corollary positions of dualism and physicalist reductions has been recognized and mind has been acknowledged to be inherently embodied, modern thinkers have undercut this recognition by tending to construe mind in terms of consciousness. Certainly the ancient conception of mind as psyche can be faulted for neglecting conscious reflection, leaving unexplained how the different functions of the soul are united in one subject, as well as how the different contents of the various senses, imagination, and reason can be ascribed to the same objectivity. Consciousness may incorporate all mental content within the encompassing vantage point of the ego, which confronts a correlatively unified objectivity. Yet the modern privileging of consciousness has its own fateful liabilities. The focus upon conscious awareness has ignored dimensions of mind that do not involve consciousness while downplaying others—most notably discursive rationality—that involve consciousness but simultaneously transcend its constitutive subject-object opposition. This is exhibited by how most thinkers who subsume mind under consciousness treat the subject-object polarity of conscious awareness as *always* involving conceptualization and discursive rationality. Supposedly unless conceptual unities are thought to pervade perceptions necessarily, appearance cannot have any non-subjective unity enabling an objectivity to confront awareness. Yet if all forms of consciousness involve thought and, therefore, linguistic expression, language would somehow have to be invented and later be acquired by individuals who beforehand cannot be aware of objects, themselves, or any other interlocutors. Such neglect of the other dimensions of embodied mind therefore leaves in abeyance not only consciousness’s own mental preconditions, but the very possibility of *thinking* consciousness’s own character.

These difficulties are symptomatic of how the departure from mind/body dualisms remains incomplete so long as consciousness is held to be paradigmatic of mental life. Far from bridging the mind/body divide, consciousness is the very form of mind in which awareness stands over against an objectivity from which its own reflection is always excluded. Even when consciousness reflects on its own awareness, the awareness it apprehends is still different from the apprehension it has of it. Only a further reflection can grasp the latter as its object, but with the same result that what consciousness is conscious of still remains different from the conscious act apprehending it. Dualism can never be fully overcome when subject and object remain distinct, as is constitutive of the defining opposition of consciousness.

This predicament leaves knowledge problematic. So long as mind is construed solely in terms of consciousness, where knowing and its object are mutually exclusive, any correspondence between knowledge claims and their referent remains unverifiable. Since knowing's own determinations remain mental contents distinct from their object, mind has no way of accessing the fit between them and what they are about. Any putative consciousness of correspondence itself involves a mental content distinct from both the object under scrutiny and its correspondence with consciousness. Since what consciousness refers to is accessible to it only as it is given *within* consciousness as a mental content, what the object is in itself is never thereby ascertainable.

In face of this problem, contemporary philosophers of mind have, thirdly, all too often taken a transcendental turn and treated the investigation of mind as an epistemological concern, supplanting ontology as first philosophy. By considering the structure of mind constitutive of what mind knows, transcendental theorists hope to escape the problem of accessing things in themselves independently of how they are given to consciousness. If the object of knowing is determined by the structure of mind, then an investigation of mind will bear upon what mind can truly know, since no chasm need be traversed to access features necessary to any object. By treating mind as the determining ground of knowledge, however, these theorists fall prey to the same problems of invoking a privileged foundation that plague the precritical philosophy from whose direct appeal to the given they seek a remedy. Although objectivity may now be a construct of mind, rather than a contemplated, found given, the structure of mind is here just as immediately stipulated as any thing in itself. The knowing of mind by the transcendental epistemologist thus remains just as dogmatic as the knowing of being by the precritical ontologist.

Moreover, treating mind as an epistemological foundation renders mind insusceptible of any systematic treatment, while guaranteeing that the cognition conceiving mind cannot be critically validated. This is because privileging mind as an epistemological foundation requires treating mind as something distinct

from the objects it cognizes and as something that cannot have an object-like determination of its own. Only if mind is different from what it knows can mind be investigated on its own without making claims about what is. Then alone can the examination of mind be a preliminary investigation on which depends knowledge of anything else. For this reason, the cognition addressing mind must also be different from that of the mind it investigates. This is inevitable, since the mind under scrutiny knows objects distinct from itself, whereas the investigation of mind has mind as its object. Consequently the investigation of mind cannot put the cognition it employs under scrutiny, but must instead simply take it for granted.

Conversely, to the degree that mind is treated as an epistemological foundation, determinative of the objectivity of which mind can be aware, mind cannot itself have any object-like character. If mind did, it would have objective features that it had not constituted and thereby forfeit its Archimedean objectivity-constituting role as epistemological foundation. Thus, it is not surprising that foundational epistemologists from Descartes through Kant all treat mind as a disembodied “noumenal” subjectivity, comprising a consciousness extricated from the world it confronts.

Moreover, because all objects of that world are determined by mind no matter what they may be, objectivity is subject to an external necessity that is indifferent to what objects it governs. This leaves the world a mechanism ordered by laws of matter, in which efficient causality reigns supreme to the exclusion of any formal or final causality or any self-activity. Insofar as such an objectivity has no place for subjectivity, let alone for life, mind cannot be coherently conceived to inhabit the world it allegedly constitutes. Hence, treating mind as an epistemological foundation both reduces mind to consciousness and reaffirms mental-physical dualism.

The philosophy of mind will remain at an impasse so long as it follows any or all of these three interrelated strategies, embracing mind/body dualism or its complementary reductionisms, conflating mind with consciousness, and privileging mind as an epistemological foundation. The finality of this predicament, however, has long been challenged by an approach distinguished by three counter-imperatives: (1) overcoming dualism and its corollary reductionism by conceiving mind as inherently bound up with a living body in nature, (2) recognizing consciousness to be but one facet of mental life, and (3) refusing to treat the conception of mind as an epistemological investigation. This approach, pioneered by Hegel in his *Philosophy of Subjective Spirit*, has largely languished misunderstood and undeveloped. Renewing this option requires overcoming the three root difficulties blocking its pursuit.

First, it must be shown how mind/body dualisms are not only insupportable, but surmountable. This involves comprehending how mind cannot retain

its unity, individuality, and specifically mental character without being embodied. Further, it must be shown how mind can be embodied without sacrificing its characteristic subjective, self-active process. Although neither mechanisms nor artifacts can act upon themselves with the reflexivity essential to mind, the self-sustaining process common to life is not itself sufficient to provide the reflexive centrality of mental subjectivity. For mind to be embodied, the particular form of animal life is required. Recognizing this sets the stage for comprehending the life of the mind as always the life of a sentient, irritable, self-moving animal subject.

Second, the philosophy of mind will undercut its own truth unless it can show how mental life is not restricted to consciousness, entrapping knowing in the subject-object opposition of conscious awareness. Liberating mind from reduction to consciousness has two aspects. On the one hand, it involves uncovering how consciousness has preconscious mental presuppositions, comprising the life of the psyche. On the other hand, it requires showing how consciousness, as well as self-consciousness, need not involve the discursive rationality that mind acquires as theoretical and practical intelligence. Without consciousness able to be prelinguistic and preconceptual, linguistic intelligence becomes unattainable. For how can language arise in the first place or individuals learn language from others if they cannot already be conscious and self-conscious? By uncovering the mental preconditions of consciousness and non-discursive consciousness and self-consciousness, the philosophy of mind can capture the full breadth of mental activity, while making intelligible its own psychological realization.

Third, the philosophy of mind must come to understand why it cannot essentially be an epistemological investigation. Even if the investigation of intelligence provides philosophy with an account of its psychological realization, cognition will fall prey to the dilemmas of privileging some foundation so long as the psychological enabling conditions of knowing are treated as *determining juridical* conditions distinguishing the true and false beliefs they equally make possible.

The Living Mind will begin to tackle these three tasks in pursuit of systematically developing philosophical psychology. Part I, the Preconditions of Mind, examines why mind must be embodied, why mechanisms and artifacts cannot have minds, and why mind must not just be alive, but possess animal life. On this basis, Part II, the System of Mind, addresses why mind cannot be reduced to consciousness, but must also involve a psyche and intelligence. *The Living Mind* thereupon conceives the psyche and consciousness, setting the stage for the subsequent investigation of theoretical and practical intelligence.

Part I

THE PRECONDITIONS OF MIND

CHAPTER 1

Mind and Matter

The overcoming of mind–body dualism requires establishing that mind has material enabling conditions and identifying what these are. This does not amount to reducing mind to those conditions, for enabling conditions do not determine what they make possible. Instead they provide prerequisite factors that must be incorporated in the life of the mind, which adds something of its own that they do not possess of themselves. Reductionism is precluded insofar as enabling conditions can exist apart without involving the mental reality for which they are indispensable.

Determining material conditions of mind might appear to involve insurmountable methodological problems. If there are any such enabling conditions, mind cannot be or be conceived without them. Nothing mental, therefore, can be identified as such without already bringing in such material factors. Yet to know whether any material factor is an enabling condition of mind seems to depend upon a prior identification of mental reality.

There are two ways of resolving this dilemma. On the one hand, one can consider putative determinations of mind and examine whether they are possible without the putative enabling conditions. On the other hand, one can examine how all mental determinations, in their own structural interconnection, involve these conditions.

Because all material factors minimally involve matter, the first question that must be answered is why mind need have matter of any sort? Why cannot mind be purely immaterial? This question is of decisive importance, as much for philosophical psychology as for theology.

1.1 Can Mind Have No Material Preconditions?

The idea of a wholly immaterial mind has had wide currency, rooted in the universal experience of self-consciousness, whose solely temporal stream of mental content seems to confirm continually the nonspatial reality of mind. Yet as self-evident as the immateriality of mind may seem to be, it poses insurmountable difficulties so long as that immateriality remains detached from material preconditions.

These difficulties revolve around the interconnected problems of enabling mind to have specifically mental character, a temporal ordering, and an individual unity. All attempts to conceive mind without body founder on an inability to provide for these fundamental aspects of the reality of mind.

Although mental character has often been sought in the intangible dimensions of consciousness, excluding all corporeality presents a daunting challenge. If mind involves no materiality, how can mental life be distinguished from a succession of logical categories that exhibit determinacy in general, rather than anything specific to mental reality? This problem applies just as much to the content as to the form of mind.

On the one hand, how can a wholly immaterial mind have any content that is irreducible to logical determinations? Without any material body, mind has no resource for passively receiving content in the manner of sensibility. Nor will mind be in a position to recall and modify any such sensible content in images produced by reproductive and productive imagination. At most, mind might retain conceptual determinations, but these would be nothing more than the thought determinations that logic involves in its thinking of thinking. Of course, if logic is to make its appearance in the world as an actual philosophical achievement, embodied thinkers are required to give it a tangible expression recognizable by others.

An immaterial mind, however, can hardly engage in any practical interaction with nonmental reality, nor interrelate with other minds. Mind would seem caught in an impenetrable solipsism. Perhaps, as Descartes imagines in his *Meditations*, such a solitary mind could still affect itself with feelings and images and retain some nonlogical content.

Yet even a solitary solipsism becomes suspect once one considers how an immaterial mind could retain any individual unity. The same difficulty that renders relations between minds questionable impugns the individual identity of each and any mind. This is because what makes any interaction between minds problematic is the challenge of individuating one immaterial mind from another. If mind is just a temporal stream of immaterial contents devoid of any

spatial ordering, how can different mental contents be grouped with any others to distinguish parallel streams of coexisting immaterial minds? What could connect any of the simultaneous manifold contents to certain predecessors and successors rather than others? If mind is no more than an immaterial stream of mental contents, nothing is available to anchor these to different subjects. Indeed, talk of even a single subject seems precluded. For how can there be any individual mind, with a unity of its own, without a unique spatio-temporal location, rooted in some actual body? Mental contents might follow one another in succession, but their temporal order can insure neither that they all belong to the same mind, nor how simultaneous or successive mental contents are distributed among coexisting minds.

Ascribing the temporal stream of mental phenomena to an underlying immaterial self is of little avail, for how can that self retain an individual reality of its own that would distinguish it from any other mind? Apart from its mental contents, such a self has nothing to differentiate it from any "I" that must be thought to accompany "my" representations. Yet the specific content of the mental flow cannot suffice to secure its identity, for what insures that this stream of representations belongs to this immaterial self rather than another?

Even if the unity of an immaterial mind were not a problem, the very presence of any mental content would be inexplicable. Access to intelligible thoughts would be just as mysterious as access to sensible representations. Although a mind might think thoughts in a soundless, sightless, intangible, inner monologue, doing so would still depend upon either simultaneous or prior intuition of the sensible reality of the signs that must be used to express its immaterial ideas. If mind has no body, however, it can neither produce nor apprehend the tangible signs that language requires as an enabling ingredient of thought. Indeed, if only an animal organism can sense signs and engage in goal-directed behavior, as required to produce something to stand as a sign for something else, mind would have to have an animal body, able to perceive and act. Without such an embodiment, mind would be equally unable to individually establish any of the lawful syntactical relationships enabling signs to communicate something about what they designate, without which articulate designation itself remains problematic. Moreover, without participating in an independently established framework of differentiated meanings and rules for connecting their signs in different ways, no mind could distinguish between correct and incorrect usage of any sign with which it might attempt to think something determinate. That linguistic framework would have to have a tangible expression to be accessed and employed. A purely immaterial mind would have no tangible reality by which it could enjoy either any receptivity to or any way of participating in the process underlying communicable thought. To the extent that concepts require language for their expression and language can be acquired only in interaction

with other linguistic agents, an immaterial mind will never be in a position to have conceptual content.

The temporal ordering of mental content might seem less problematic to secure. Even at its most intangible, mind would seemingly add at least this one dimension to logical determination—the temporal flux of “mental” content. Yet how would an immaterial mind be able to possess contents in temporal rather than logical succession? Kant raises this question in his “Refutation of Idealism,”¹ pointing out how the mere flow of mental content contains no abiding backdrop to sustain the temporal continuity of the fleeting moments of each successive representation. Only reference to something enduring in space can connect mental contents in a continuous flux. Without an enduring material backdrop, all mind has are momentary contents, with nothing to link them together.

Although this consideration requires that mind be conscious of a spatial and thereby material objectivity, it might seem to leave open the possibility that mind itself remain an immaterial subject completely disengaged from the spatial world it confronts. Yet how could that spatial world be apprehended in any determinate fashion, without that apprehension viewing objectivity from a spatially determined vantage point, be it fixed or moveable? What is near and far, in front or behind, up and down, or left or right, are such only in relation to a specific location. But no points in space are distinguishable from one another unless something material inhabits them, allowing distance as well as motion to be tracked. Accordingly, how could mind’s vantage point in space be identifiable by mind itself if there were not a material anchor to which mind finds itself indissolubly linked? An immaterial mind, lacking any spatial embodiment, will thus have not only no spatial ordering, but no temporality either. And without any temporal form to impose upon mental contents, these contents will be indistinguishable from logical terms.

1.1.1 LESSONS OF THE DILEMMAS OF MINDS WITHOUT BODIES IN PLATO, ARISTOTLE, AND DESCARTES

Plato, Aristotle, and Descartes have all ignored these difficulties by embracing various versions of disembodied minds. The outcome of their efforts is worth recounting, for their mistaken conceptions shed light on what must be avoided.

Platonic dialogues often entertain the idea of the soul separating from the body, either to interact with other disembodied souls or to return to another body in a reincarnation. Never, however, is any explanation given as to how the soul retains its identity apart, let alone in switching, from one body to another. The *Meno*’s parable of recollection suggests that the unity of each soul is identifi-

ably secured either by the continuity of its passage from one body to another or by the possession of the same trove of ideas which the individual soul acquired in its first incarnation and then retained as yet unrecalled ideas at every rebirth.² Yet how can that lineage be traced in space and time if there is no continuous physical transmission to which the same mind is always connected? How can one certify that the same soul has made its way from one body to another, when those bodies have no special physical connection? Appeal to a continuity of mental contents is of no avail. However strong feelings of déjà vu may be, the reincarnated soul does not retain a continuous memory of its experiences in each previous body, enabling it to recognize itself to be the same mind that inhabited its other incarnations. After all, what each soul is alleged to be in a position to recollect are not memories of tangible events recorded in sensuous images, but conceptual ideas providing the eternal nature of things. Furthermore, nothing guarantees that minds that share some latent mental contents, be they images or concepts, are one and the same, especially when coexisting minds must have some ideas in common in order to engage in discourse.

Aristotle seemingly avoids these problems of an immaterial mind by conceiving the soul to be the moving principle of the living organism, inextricably joining mind and body. Yet Aristotle contradicts his own conception in *De Anima* when he suggests that the active intellect, which thinks thoughts alone, might exist detached from the body.³ The fragmentary text of *De Anima* offers little explanation of how this could be. Aristotle's own account of self-thinking thought in Book Lambda of the *Metaphysics* undermines that possibility by revealing how little is left to provide psychological reality when thought and matter part ways. There Aristotle explains how self-thinking thought qualifies as the highest being insofar as it is pure actuality, lacking matter's potentiality and its determinability by something else.⁴ Nevertheless, it is inexplicable how self-thinking thought's pure intellectual actuality might render it an unmoved mover that sets material substance into motion, or how its eternal thinking of itself can involve any temporal process, differentiated mental content, or individuation.

The unmoved mover may have to be a pure actuality so as to need no mover to set and keep itself in motion. Furthermore, insofar as matter has potential to be formed and a pure actuality must be without matter, the unmoved mover would seem to require a self-sustaining immaterial process. A thinking that thinks itself might well uniquely qualify for such a pure actuality, since its immaterial identity of form and content (where the thinking and what is thought are the same) seemingly enables it to depend on nothing but itself. Yet how does self-thinking thought relate of itself to any specific material bodies individually or in their plurality, and engender locomotion in so doing?⁵ Lacking any matter, self-thinking thought can hardly provide any material causation. Nor can it be the formal cause of locomotion since the only form self-thinking thought can

provide is that of its own thought. This cannot in principle be embodied nor be subject to change since it is eternally the same thought of itself. Accordingly, Aristotle suggests that celestial bodies are moved eternally by the unchanging cogitation of self-thinking thought just as the object of love moves the lover, as a final end. Yet how can self-thinking thought be the final end of a motion that never produces or reproduces this, its telos? The locomotion of material things never converts itself into the immaterial process of self-thinking thought, nor does self-thinking thought ever depend upon motion for its own working. How then can material locomotion be for the sake of self-thinking thought? This problem poses on a cosmic scale the difficulty of accounting for how a purely immaterial mind can move the body to which it is somehow exclusively directly connected. Just as self-thinking thought seems unable to be an unmoved mover, so an immaterial mind is at a loss to control a body to which it has no inherent, let alone physical, relation.

Moreover, self-thinking thought has neither any particular matter nor any particular thoughts by which it could be individuated as an instance of pure actuality. This may allow pure actuality to stand in contrast to the impure actualities it inexplicably moves, but it precludes any differentiation from other instances of its kind. Therefore it can hardly serve as a basis for individual minds, which cannot have any finite individual reality without being able to undergo their own development as well as distinguish themselves from one another. It thus is no accident that Hegel invokes Aristotle's self-thinking thought not in the philosophy of mind, but as a forerunner of the self-thinking thought of logic, whose pure categorical development may be realized in the actual thinking of philosophers, but which otherwise has no specifically psychological character.⁶

The pure immateriality of self-thinking thought has been invoked anew by the Cartesian philosophy of mind, which transposes Aristotle's pure actuality into the framework of self-consciousness to no better avail. Descartes appeals to pure self-consciousness as the only immediately secure redoubt of certitude. This is because consciousness of anything other than the self apprehends something whose existence is not constituted by my mere awareness of it. My representing it thus leaves its existence in question. By contrast, self-consciousness consists in nothing but consciousness's awareness of itself. One cannot doubt the reality of self-consciousness because being conscious of one's own awareness comprises the very being of self-consciousness. In this self-thinking of the thinking self there is no gap between idea and thought object. That gap demands bridging to secure correspondence and objective certainty, yet it can never be traversed so long as consciousness has no access to its objects other than through its own thoughts. Just as self-thinking thought is a pure immaterial actuality, being what it thinks itself to be, so my self-consciousness constitutes its own reality, being in virtue of having the idea of itself. In having the idea of anything else, I do not constitute

my object's reality and thus I have no reason to think that I therein commune with anything other than my own subjective ideas. Hence, Descartes can claim to be self-conscious without being conscious of anything other than the self. On this basis, he can equally be certain that his mind is an immaterial substance, since if it had any materiality this would be an embodiment different from his idea of it, as well as different from his ideas of all the other bodies with which it would tangibly interact.

Yet can consciousness be self-conscious without being consciousness of objects other than itself or of a body of its own or of other conscious selves? This is a question that can only be fully answered within the theory of mind and the analysis of consciousness and self-consciousness. Yet, by way of anticipation, what that analysis will establish can here be invoked. It indicates how wrong Descartes is to assume that mind can be an immaterial substance enjoying discursive self-consciousness without consciousness of a nonself, or, more particularly, of a living animal body of its own, as well as of other embodied conscious interlocutors.

A first wedge against Cartesian immateriality is provided by the implications of Kant's "Refutation of Idealism," which, as we have seen, indicates how the temporal form of self-consciousness presupposes consciousness of an abiding spatial objectivity. Although Kant fails to acknowledge it,⁷ consciousness of spatial objectivity itself involves consciousness of one's own spatial location, without which spatial relations cannot be apprehended in any specific direction. Moreover, to be aware of one's own location in any determinate fashion necessitates that one have an embodiment that one can recognize to be one's own. Furthermore, it is hard to imagine how one could attribute that body exclusively to oneself if one lacked feelings that could be uniquely assigned to one's body or lacked bodily motions that one could perceive to be uniquely connected to one's own mental contents. For these reasons, self-consciousness must have a body both sentient and self-moving. Insofar as animal organisms are characterized by sensation and self-movement, it follows that self-consciousness is not just embodied, but constitutively realized as a living animal.

To be a *discursive* self-consciousness, capable of meditating about one's own doubts, however, requires that one be not just a dumb animal, but an animal with the linguistic intelligence to theorize about the certainty of knowledge and the nature of self-consciousness. Yet to be a discoursing animal presupposes that one has acquired language. If one cannot invent language in solitude, one faces two alternatives. On the one hand, if no linguistic community already exists in which one can participate, one must join in inaugurating one by interacting with other prospective interlocutors to establish together communicable signs and recognized forms of syntax. On the other hand, if a linguistic community is at hand, one must learn language from its members, either directly or perhaps by

means of instructional artifacts that they have produced.⁸ In every case, a discursive self-consciousness must have experienced and linguistically interacted with other interlocutors, even if at one remove. Hence, contra Descartes, one cannot be discursively self-conscious unless one is conscious of spatial objectivity, of one's own animal body, and of other linguistically competent individuals. In other words, one cannot be certain of oneself as a thinking thing without being just as certain that there is a material world, that one is a living animal in that world, and that one has interacted linguistically with other similarly embodied minds.⁹

If mind cannot be immaterial, how can it be embodied? Although the difficulties of conceiving mind apart suggest that mind may be essentially tied to the animal organism, establishing any such connection requires comprehending why mind cannot be possessed by physical matter as given by nature, by artifacts, or by plants. Then one can address what it is about the animal organism that may make it an enabling condition of mind.

Fulfilling this task involves contending with the long-recurring tradition that has sought to escape the dilemmas of mind–body dualisms by reducing mind to something purely physical, either as a form of natural inanimate matter, a type of artifact, or a biological phenomenon. From the Pre-Socratics, to the ancient Indian school of Carvaka philosophy, to the French Enlightenment materialists, up to the latest speculations about quantum mechanics theoreticians,¹⁰ thinkers have sought to treat mind as something wholly material, thereby eliminating the problem of explaining how an immaterial mind can interact with a body and the world in which that body is situated. Similarly, thinkers have turned to artifacts to explain the working of mind, as if mind could be just a machine, involving, for example, nothing but the same operations that computers can perform. And finally, theorists have sought to reduce mind to the brain, as if mental life were indistinguishable from the biochemical processes of a certain development of the nervous system engendered through the blind mechanism of evolution.

In all these cases, some physical phenomenon is treated as not just an enabling constituent of mind, but as the exclusive reality of mental existence, against which all else is phenomenal illusion. Such reductionism appeals to given descriptions of mental life that are then revealed to be a type of reality otherwise determinable without mental categories. Since the mental phenomena are different from what is taken to be their essential ground, one must explain how that privileged ground not only is what it is, but posits the specific phenomena that end up reduced to it. That challenge remains a perennial stumbling block for reductionist explanations that conceive mind to be just a form of matter, a type of artifact, or a neurological process.

Such “epiphenomenalisms” notoriously fail to explain how the derivative, illusory phenomena of mind are generated from the properties they ascribe to

matter. Although the material universe is supposedly thoroughly causally determined through the mechanism by which matter and energy are conserved, mental phenomena comprise an additional effect, which neither consumes energy in being produced, nor figures as an energy-transmitting cause like every other effect in material nature, nor exhibits any of the “quantitative equivalence” between cause and effect¹¹ basic to material change. Hence, to cause the epiphenomena of mind, matter must violate its very own principles of conservation and mechanistic determination and take on an inexplicable occult capability.¹²

To resist the incoherencies of material reductionism and avoid reverting to the immaterialism of mind–body dualism requires comprehending how mind can involve matter, as well as animal life, without being just a material, physiological, and neurological reality. This requires understanding how material and biological determination does not provide what is specifically mental as well as understanding how the mental is not precluded by involving enabling conditions that by themselves possess no mind.

1.2 Can Physical Nature Possess Mind?

Past and present cultures have long regarded physical nature as invested with spirit, whose mind must be contended with, be it through offerings, prayer, or other behavior. Yet with the disenchantment of nature, matter has lost its soul and materialists now try to eliminate mind altogether by reducing what appears to be mental to merely physical process.

Can physical nature possess mind? Lifeless objectivity may be minimally characterized as a domain governed by mechanism and chemical process (chemism). Mechanism and chemism can both be construed logically as forms of determination that can have applications in various spheres of reality apart from mere matter. This is why mental activities can be described in mechanical or chemical terms without rendering those relations purely physical. We can have “mechanical” memory, where we recall terms by rote, without any attention to their meaning or syntax, just as we can find ourselves emotionally attracted to another who has the right “chemistry.” In neither case, however, does the presence of mechanical and chemical relationships in mental life signify that all of mind is simply mechanical or chemical in character. Nor do those relationships entail that matter that is merely mechanistically or chemically determined can possess any mental reality.

To comprehend the relation of matter to mind, one must identify the limits of mechanism and chemism and to what degree these limits leave room for what is mental.

In the wake of early modern philosophy and Newtonian mechanics, physical reality is commonly presumed to be exclusively determined by efficient causality. In and of itself, efficient causality is a principle whereby one entity posits some alteration in some other entity or entities. In the absence of any formal or final causality, that alteration can neither involve a change in form, nor a change serving a purpose. A world exclusively determined by efficient causality is one where nothing that happens has to do with what kind of thing entities may be or with any ends. Determined in complete indifference to form and purpose, such an objectivity is governed by principles that apply equally to all things irrespective of their kind and import, that is, to all things insofar as they are just matter. Accordingly, the world of efficient causality comprises a nature consisting of objects determined by laws of matter.

As Michael B. Foster has argued, this view fits the Christian doctrine of creation.¹³ Nature, construed as the creation of an act of divine will, cannot have the structure of an artifact. Artifacts issue from an act of making, rather than creating. Making, which the ancient Greeks termed *poesis*, imposes a separably conceivable form upon a preexisting material, giving it a new design that can serve some function. Artifacts, as products of making, therefore embody antecedently conceived form purposely imposed upon a given material. Neither the form nor the matter of the product is created by the act of production. The act of making simply brings them together, informing preexisting material with preconceived design. Every artifact thus has a design that can be thought apart from the perception of its individual embodiment, a design that can be realized in another embodiment through another similar engagement in making. As such, an artifact comes to be through not just material and efficient causality, but formal and final causality as well, reflecting the imposition of form that provides for the artifact's potential function, as well as its conceptual intelligibility. Consequently, an artifact cannot be understood as such simply by noting its sensible features and material composition. As archeologists well know, one cannot understand what an artifact is without further coming to think its form and function. By contrast, created nature, generated *ex nihilo* by an act of will presupposing neither antecedent forms nor preexisting material, lacks formal as well as final causality. Accordingly, creation comprises a material world inscrutable to any a priori knowing of forms of genus and species, and the deductions that follow from such hierarchies. Creation will rather present phenomena whose specific natures can only be discovered empirically as contingently given family resemblances, whose boundaries will always be revisable in face of new data and new ways of demarcating what has been observed. Since specific natures will therefore have no necessity of their own, if any necessity is to determine created nature, it must consist of a determinism indifferent to the particular nature of things, a determinism applying to matter itself. On this basis, nature will be a

realm of material laws, applying to all objects irrespective of what kind of thing they may be, applying, that is, in respect to their being matter. Comprising a domain in which entities are externally determined with indifference to what they are, nature will be a free-standing mechanism.

Whether theologically grounded or not, an objectivity governed by laws of matter cannot simply involve efficient causality. Material laws apply to a plurality of bodies, but these laws cannot themselves account for objects' plurality, spatio-temporal locations, or even specific masses. Precisely because efficient causality is indifferent to the distinguishing natures of what it determines, it can hardly individuate its cause and effects, be it with respect to quantitative or qualitative distinctions. Indeed, cause and effect cannot sustain their very own differentiation. As Hegel shows in his *Logic of Essence*, a cause only comprises a cause in virtue of positing its effect. Otherwise, it is at best a potential, rather than an actual cause. Yet, if a cause is a cause only in virtue of having its effect, that effect is thereby rendered the cause of its cause's causality. Then, the cause becomes the effect of its effect, leading both cause and effect to swap roles. This engenders a relation of reciprocity in which cause and effect relinquish their distinction by equivalently determining and being determined by one another.¹⁴

Since causality cannot itself maintain the distinction of cause and effect, objectivity, as a realm of efficient causality, can only be a free-standing mechanism if mechanism involves entities that are individuated in and through themselves, apart from the causal interaction to which they are simultaneously subject. Since efficient causal determination of objects is indifferent to their individuation, it neither constitutes nor impinges upon their individuality. These objects must already be what they are apart from their causal interaction. Mechanism therefore applies solely to objects whose own identity is completely independent of and unperturbed by the workings of mechanical influence. Only on the basis of this self-subsistent individuality can there be distinguishable beings relating to one another solely through the wholly external relationship of efficient causality.¹⁵

For this very reason, conceiving what an object is, that is, thinking its concept, can provide no knowledge of what efficacy it will have in the process of mechanism. This is why Hume adamantly denied that causal relations (e.g., efficient causality) can be known by reason. It is also why the only necessity that mechanism can involve must determine objects in indifference to what they are. In regards to physical objects, this signifies that mechanism will impact upon nothing but bodies as bodies, that is, upon the spatio-temporal ordering of their matter, leaving otherwise undetermined everything else about them. Although mechanism may impact upon the shape and position of bodies, it can give them neither any import nor any essential form comprising some species being.

That mechanism involves objects determined in and of themselves independently of material law is crucial for enabling mind to be embodied without

being reduced to the external necessity of matter in motion. If mechanism just involved undifferentiated bodies governed by laws of movement, whatever involves material would be nothing but conditioned motions of matter. Since, however, mechanism requires individuated objects, but leaves their individuation independently determined, the door is open for material things to have further aspects that, although incorporating matter, cannot be limited to mechanistic motion.

Chemical process already exhibits this irreducible supervenience in a most minimal way. Chemical interaction is just as external as mechanical interaction. In both cases, objects are determined from without, independently of any imposition of form or purpose. Mechanical motion gets imparted by some other object, just as chemical process gets instigated by some catalyst bringing reagent objects together, enabling them to interact chemically. What distinguishes chemical process from mechanism is that objects chemically affect one another not simply as matter subject to common laws of motion, but as complementary factors poised to either coalesce or break down in function of their distinct difference. Because the chemical process occurs in respect to this relational difference it neither violates nor is impeded by the mechanical interaction that simultaneously affects its objects as mere matter in motion. Mechanism cannot account for chemical process since it is indifferent to any specific affinities in bodies and the workings of such affinities is precisely what distinguishes chemistry from mechanics. Yet because chemically reacting bodies do not relinquish their subjection to laws of motion as matter *qua* matter, whatever specifically occurs in chemical process only adds something that mechanism leaves undetermined.¹⁶

What allow both mechanism and chemical process to be subsumed within further processes of additional character are two interrelated features they share: their subjection to external determination and the independent individuation of the objects they involve. Neither mechanism nor chemical process is inherent in their objects. In both cases, some condition must intervene before objects undergo mechanical or chemical change. This is why mechanical and chemical processes are not self-renewing. Their engagement depends upon something else. For this very reason, they cannot exhaustively determine the objects that figure within them. Mechanism and chemical process are both external to their objects, which therefore have identities given independently of their mechanical and chemical interrelationships. The spatio-temporal and chemical determination of an object leaves open what kind of a thing it may be, as well as what function, if any, it may serve. Chemical differences may distinguish matters in ways that dictate how they may combine and separate from one another when external conditions permit, but these remain material differences that preclude neither objects of different kinds from having the same chemical composition nor objects of the same kind from being composed of different chemicals. Con-

sequently, objects can be mechanically and chemically determined and still have features and processes that are undefined by mechanism and chemical relations. For this reason, mechanical and chemical processes can be subsumed under further processes, which may depend upon them as enabling conditions, but utilize them to realize objective relationships irreducible to mechanism or chemism.

This susceptibility to further determination is not merely a matter of indeterminism or openness to chance. The incidental convergence of two independent causal chains, such as when a person walks under a cornice just as a brick loosens and falls from it, might be regarded by a Laplacian determinist¹⁷ as chance only because our knowledge is incomplete.¹⁸ Similarly, the “absolute” chance invoked by quantum mechanics, where quantum jumps occur unpredictably, still remains governed by probabilistic laws that apply to matter with indifference to kind and import. Admittedly, probabilistic laws allow for a range of possibilities, without determining which possibility will be realized in any single case. Such “partial determinism” might seem to be required for any teleological determination or self-determination, since it seems to free events from any exhaustive determination by efficient causality.¹⁹ This liberation, however, provides no principle of its own for overcoming sheer chance. In this respect, the partial, incomplete determinism of probabilistic laws is no different from deterministic efficient causality, which cannot completely individuate the factors it governs, nor independently supply any principle for rendering this residue more than an utter accident.

If the further determinability of mechanical and chemical process involved only chance events, there would still be no room for any occurrences that realize ends in function of the specific nature of things or for any deliberate rational action.²⁰ Yet determination in respect to kind and ends, as well as self-determination, cannot be excluded so long as mechanical and chemical processes are open to external determination, which is the case whether or not they are probabilistic in character. So long as things are not just matter or chemicals, but must be further individuated even to have mechanical and chemical relationships, the door cannot be shut to those additional dimensions of life and mind on which any *theory* of mechanism and chemism itself depends.

Although the externality of mechanical and chemical processes makes it possible for mind to be embodied without being reducible to mechanics and chemistry, this same externality bars mind from being merely mechanical or chemical. In every mechanical and chemical process, objects are determined by something else in indifference to form and function. This conditioned character of every mechanical and chemical happening precludes any self-activity, where something acts upon itself in function of what it is.

These exclusions bar any mechanical or chemical reduction of two fundamental features of mental life: the self-related activity exhibited by mind at every

level and the goal-directedness endemic to conscious and intelligent action, and implicit in the psyche. How these features operate and why they are pervasively ingredient in mental life are matters that must be explored in detail in the full investigation of the various domains of mind. At this juncture, some brief anticipations will have to suffice, anticipations whose proper vindication awaits.

First, whether as preconscious psyche, consciousness, or intelligence, mind is determined by how it relates to itself. As a subject of feeling, the preconscious psyche does not yet distinguish its mental modifications as determinations of something different from itself. Yet the psyche is what it feels itself to be, registering its own psycho-physical alterations, communing with its own psychic field of sensibility without yet facing a world distinguished from itself. Similarly, consciousness is a subject confronting objectivity by relating to its own mental determinations as specifications of a unitary domain from which it has extricated itself. And intelligence intuits, represents, or thinks only insofar as it relates to its mental content as both its own product and as determinations of an independent objectivity. Admittedly, in each case, mind is embodied in the world and thereby subject to external mechanical and chemical influence. Still, mind sustains its distinctive reflexive character in virtue of how it handles its own determinations. This pervasive self-activity may involve the mechanical and chemical processes that embodiment entails, but it cannot be reduced to the external determination of matter in motion and chemical interaction.

Similarly, wherever mind holds things to have any import, reacting with emotion and undertaking intentional action, purpose inextricably intrudes in a way that blind mechanism cannot alone support. And, of course, if this goal-directed behavior is embedded in an animal organism, which sustains itself and, potentially, its species, mind will involve an organic unity that transcends the external conditioning of mechanism and chemistry.

1.2.1 THE DILEMMA OF BEHAVIORIST REDUCTIONS OF MIND

The inability to accommodate and account for these features is painfully evident in the failed endeavors of behaviorists and latter-day Darwinians to reduce mental life to a product and phenomenon of blind mechanism.

The behaviorist ploy reduces action to movement, rendering animal behavior a conditioned motion of matter determined by some antecedent motion indifferent to what it is that moves and is set in motion. All reference to purpose and self-activity is expunged under the conviction that objectivity is a mechanism in which efficient causality reigns supreme and that mind cannot escape exhaustive determination by the same blind necessity.

Some behavior may involve conditioned responses to repeated stimuli, and, indeed, much behavior of primitive animal organisms might be explained in these terms.²¹ Yet can *all* action and all activity of mind possibly be mechanistically determined? Although most behaviorists have focused on intersubjectively observable external movements, self-observation can be used to try to extend behavioral conditioning to the “inner” movements of feeling, conscious awareness, and theoretical intelligence as well. Either way, appeal to conditioned response comes up against fundamental incongruities that resist behaviorist explanation.

Obvious examples include any activity that involves improvisation or orientation. The mechanistic connection of stimuli and response simply cannot account for any instance when an animal deviates from past performance by making a different movement from a different location with a different bodily orientation in response to new circumstances. Such “improvisation” cannot be determined by appealing to fixed rules of bodily movement, which would lead the animal astray. Instead, whatever regularities occur involve some fulfillment of a certain type of outcome, such as grazing, evading predators, catching prey, successful mating, or nurturing young offspring, none of which could be achieved if behavior were rotely mechanical and circumstances had any relevant variety. For this reason, “learning” can hardly be reduced to conditioned response acquisition. Learning rather involves the acquisition of an “orientation,” providing a certain know-how enabling the animal to achieve ends of its own in varying situations. Such orientation is irreducible to mechanistic necessity.

A more basic difficulty, however, already stymies determining the identity of any stimulus and response. On purely mechanistic grounds, every stimulus has merely an objective, material specification to which a similarly determinate response gets correlated. Yet, whenever animals respond to stimuli, there is always a question as to what in the animals’ perception of the stimuli elicits their responses. A rat in a maze confronting a red square may repeatedly turn right, but is this turn a response to perception of a mark, a centered mark, a square mark, a red color, a red square, or something else?²² The uncertainty over the boundaries of any stimulus is similar to the uncertainty in meaning ascription that Quine exposes in his behaviorist treatment of what an observed speaker means when declaiming “Gavagai” in response to the appearance of a rabbit. Does “Gavagai” designate a rabbit, a rabbit of this species, a white rabbit, a rabbit leg, and so on?²³ In all these cases, any “mechanistic” determination is frustrated by something no external stimuli can dictate, namely, what the animal focuses on in directing its own behavior.

The difficulty is not limited to determining what aspect of the perceived situation is eliciting behavior. The behavior in question may just as well be responding to something imaginary or real having nothing to do with that situation, or

to something having only the most tenuous, obscure connection, or to something of a completely general nature such as lingering hunger or lust.²⁴

No less daunting a problem undercuts any behavioral identification of the response. Is the response of the rat in the maze a uniquely specific movement of each limb from the exact same location and stance, or is it simply any movement that gets the animal to the destination where some "reinforcement" is to be awaited? If the latter holds true, the response is goal-directed and not something mechanistically determined. For what unites all responses taken by the rat on multiple occasions is not exact conformity of its physical motions, but a following of the direction leading to the desired end.

Of course, if the response is goal-directed, the meaning of the response will depend upon what that goal is, as well as how it integrates with other goals, all of which is hardly unambiguously identifiable from external observation of that response. In eating a white powder, for example, is a human animal consuming what it takes to be sugar, intentionally distracting onlookers, attempting suicide, making a theatrical gesture, performing one step in some elaborate purposive sequence, or pretending to do any one of these actions?²⁵

Moreover, that the end of a behavioral response is even desired depends upon the species specific nature of the animal in question and the drives this nature involves as part of its self-sustaining metabolism and reproductive activity. Far from being indifferent, atomistic correlates, stimulus and response reflect not just the external situation of the animal and its environment, but the animal's inner states of sensibility and irritability. Consequently, stimulus and response will not stand in any one to one correspondence, but will vary given the specific interest and attention of the animal.²⁶

Given these fundamental obstacles to any mechanistic explanation of animal behavior, no behaviorist explanation can hope to account for any teleological aspects of mind, so prominent in desire, emotion, and purposive conduct, where mind is determined in view of its own ends, treating things as having an import that matters. All appeals to reflex reactions completely exclude any role for ends and intentions, reducing purposive action to blind movement contingently determined by antecedent conditions.²⁷ Owing to this efficient causal dependency, behaviorism's appeal to mechanism can no more explain any of the reflexive activities distinguishing the psyche, consciousness, and intelligence. In each case, mind resists exhaustive determination by external stimuli by being what it determines itself to be through its own mental activity. Whether feeling its own feelings, experiencing objects by means of its own perceptions, or intuiting, representing or thinking objects through what it apprehends to be its own mental products, mind acts upon itself in a manner constitutive of its identity. All this may be realized on the basis of physical and chemical interaction with its environment, but mind's distinctive character cannot be or be known apart from its characteristic self-activities.

Indeed, by leaving no place for the self-active reflexivity of mind, behaviorist psychology refutes itself.²⁸ Excluding from behavior everything not reducible to or following from observable efficient causes and effects, behaviorism renders its own theorizing impossible.²⁹ As Macmurray points out, “observing” and “inferring” cannot be so observed,³⁰ and even if they could, the accomplished reduction would eliminate critical autonomy and any possibility of independent, *normatively valid* theorizing, capable of certifying its own truth. All theory would simply be relative to antecedent conditions and there would be no way of ever validly establishing that this is so.

1.2.2 THE IMPASSE OF NEO-DARWINIAN REDUCTIONS OF MIND

Nevertheless, legions of self-proclaimed followers of Darwin have still sought to explain animal behavior and the emergence of intelligence as both determined by and reducible to the blind necessities of natural selection.

Evolution may well involve a blind mechanistic process where externally, that is, contingently, induced mutations generate inheritable features differentially affecting the survivability of evolving species. Natural selection nonetheless presupposes the fundamentally nonmechanical processes of life whereby organisms sustain themselves by assimilating inorganic and organic material from their environment and reproduce their species. The self-maintenance of organisms exhibits an internal teleology, where the parts of the organism are not externally given elements assembled by some external necessity or agency, but rather complementarily functional organs that provide for one another while thereby sustaining the whole to which they belong and within whose growth process their form and matter both emerge. These organs have no independent existence apart from their integration into this self-sustaining organic unity, which necessarily involves the specific differentiation of the organs in whose correlative functioning it consists. Just as their encompassing life process has itself as the end of its self-sustaining functioning, so reproduction has the sustaining of the species as its end. Without these dual teleological processes internal to living things, natural selection cannot get underway, for objects lacking organic unity can neither engage in a struggle for survival, nor reproduce, generating species of similarly self-sustaining individuals, nor, for that matter, mutate into new types of reproducing organisms.

Situating mind as a product of natural evolution would seem to imbue mental activity with teleological features irreducible to blind mechanism, for not only would mind be realized in organs contributing to the self-sustaining of the living being, but mind would figure in the reproductive process through which natural

selection proceeds. Nevertheless, neo-Darwinians have fixated their gaze upon the blind necessity whereby mutations arise and the related contingency of the struggle for survival, leading them to presume that mind is not only mechanistically engendered, but mechanistically constituted.

Such a move is epistemologically fatal, for if mind is wholly externally determined, its knowledge claims would always be conditioned by given factors. This leaves mind unable to surmount the relativity of its knowing to those conditions by which it is determined. How, then, could one ever be certain whether what mind is necessitated to take to be true corresponds to objectivity, or, for that matter, whether mind has the conditioned character to which it has allegedly been condemned? Neo-Darwinians might argue that evolutionary fitness insures that our minds evolve so as to know what we need to survive. Yet, how can we know this for sure? Need survival require genuine knowledge and can evolution guarantee that rational agency is a better instrument for species survival than the thoughtless sentience of those animals that may survive our own self-destructive endeavors? As Kant pointed out, brute instinct may more reliably provide for survival than a rationality that can always question the value of mere life.³¹ As we know too well, our intelligence opens the door to nuclear and ecological holocausts, leaving roaches, fungi, algae, and bacteria ready to inherit our despoiled earth. For all these reasons, any theory that deprives mind of autonomous self-activity undercuts the justifiability of its own claims.

Just as damning are the psychological incongruities of the neo-Darwinian reduction. Macromolecules may replicate themselves given the right external conditions and catalysts, and randomly assembled environments might enclose these molecules to give rise to self-sustaining unicellular organisms from which multicellular organisms could evolve. Further random mutations could then eventually engender animal organisms with musculature, sensory receptors, and centralized nervous systems making sensibility and irritability possible.³² And, finally, further evolution could produce the physiological prerequisites for linguistic intelligence and thought. But can a mind emergent from natural selection be adequately understood in terms of the bio-chemical process of macromolecules, stimulus-response mechanisms, or other mechanisms ingredient in animal life?

Neo-Darwinian reductionists like Daniel Dennett offer a scenario conflating the genesis with the actuality of mind, wherein that genesis is itself reduced to a progressive evolution of ever more complex mechanisms. The huge crystalline macromolecules from which life emerges, and which remain incorporated in the genetic material of organisms, are depicted as if they were "tiny machines," natural "self-replicating robots," capable of performing certain actions, albeit without intention. Sensitive to variations in their environment, these molecular machines dumbly execute jobs suitably designed by the blind compulsions of natural selection.³³

Integrated into evermore-encompassing machines composed of machines made of machines, life forms emerge with specialized subsystems “extracting energy and material from the environment and protecting and repairing themselves when necessary.”³⁴ This provides for what Aristotle called the “nutritive soul,” the principle of organization whereby all living things enjoy a self-regulative and self-protective organization differentially activated by different conditions, all once more “designed” by natural selection. Present in the metabolic, immune, and other self-maintenance systems that animal organisms incorporate, this organizational form gets supplemented by a new “mechanism” separating animals from plants—a nervous system, providing more nimble transmission of information about the environment and the internal state of the organism, as well as controlling effects by which the organism operates as an “*information-modulated, goal-seeking system*.”³⁵ What has emerged is, allegedly, the natural equivalent of a thermostat, a simple “pseudo-agent,” which controls functions on the basis of a continual registering of information.

Mind can then be seen as an extension of the nervous system by being held to be no more than the control system of the body, processing information serving the regulation it performs.³⁶ The intentionality of mind, whereby mental contents are about something, and mind’s apprehension of its own reasons are both presented as if they could be explained in terms of this operant functionality.

Yet can either intentionality or having reasons be reduced to a mechanism of information processing? To have intentionality, mind must relate to its own mental modifications and treat them as specifications of an objectivity having an independent unity distinct from that of mind. Unless mind so relates to its own mental content and acts upon it in this way, there is no opposition of consciousness, of subject and object, without which intentionality is eliminated.³⁷ Even if mental contents were attracted to one another by mechanistic associations such as Hume³⁸ and connectionists³⁹ invoke, no such orderings would bring us any closer to intentionality.⁴⁰ If mind does not relate to its own specifications, there is no mental content for it with which it can refer to any object. By the same token, unless mind treats its mental content as a determination of not only itself, but something independently confronting it, mind cannot advance beyond the self-feeling of the psyche to the intentionality of conscious awareness of some object. A “mental” mechanism might register determinations of something external that acts upon it and these registrations might cause manipulations of the body.⁴¹ These motions, however, all lack the self-relation without which awareness of any sort becomes unintelligible. In each case, what moves is moved by something else, moving something other in turn. Receptors are acted upon by stimuli, impelling actuators to produce alterations in different elements of the bodily mechanism. Nowhere does a subject impact upon itself and relate to its self-transformation. A thermostat may “process information,” transducing temperature-sensitive

material volume changes into electric currents controlling heating machines. Yet since the thermostat does not relate to itself so as to register its own registering or actuating, it cannot be aware of how it is acted upon or how it moves something else.⁴² Even a neural network that adjusts its connections in virtue of past reinforcements does not register the history of its own transformations, but instead simply is the “wiring” it has become. Whatever role a connectionist neural network may play in physiologically realizing consciousness, it does not relate to its own configured firings, let alone relate them to something else, as intentionality requires. Similarly, a computing machine may manipulate the cybernetic electronic representations of propositions, with each operation caused by some predecessor and precipitating another. Yet awareness of these electronic movements as representations of propositions and of these propositions *as* reasons both require the self-relating specific to linguistic intelligence. Here mind must treat its mental content not only as being about something, but as being a mental content generated by mind as an argument, involving concepts and judgments whose intelligibility resides within the ongoing intersubjective interaction of a linguistic community. When instead intentionality gets directly imputed to some mechanism, whether artificial or allegedly biological,⁴³ some homunculus is invariably required to provide the lacking self-relation.⁴⁴

Not surprisingly, the neo-Darwinian conception regards mind as a mechanism that operates upon the body,⁴⁵ not as something that acts upon itself, encompassing the body as it does so. Since mechanism precludes self-activity, mind as mechanism can only act upon something else and can only do so by being determined to so act by something else in turn. For neo-Darwinians like Dennett, what determines mind to be the information-processing control mechanism it is alleged to be is natural selection, which imposes design upon the mind “as if” mind were an artifact made by nature for the sake of species survival.⁴⁶ A nature that produces artifacts, however, is not a nature that involves the self-activity distinguishing life from inorganic mechanisms. To operate like an artisan, such a nature must work upon a material distinct from its own agency, imposing a form given antecedently to the informing act and its recipient matter. If natural selection functioned as an artisan, living things would be produced artifacts with a general form detachable from its multiple embodiments, a form lacking the power to realize itself in any individual and to reproduce itself in the species it unites. Admittedly, DNA might seem to be such a design since much of its genetic code is common to species members and related species, and genetic mutations result largely from inorganic external contingencies. Nonetheless, since the DNA of an organism is common to all its cells at all stages of development, the genetic code cannot figure as a blueprint externally imposed upon otherwise formless matter. Since different types of cells of the same organism have identical DNA and the organism retains the same DNA throughout all stages of its meta-

morphoses, the relation of DNA to the organism must be something other than that of form and matter in an artifact, where each particular embodiment of the form exhibits the same fixed morphology. At best, DNA comprises an element in an organic process that activates DNA, as well as every other mechanical and chemical relation, in continually varied ways so as to contribute to cell differentiation, the growth and self-maintenance of the living individual, and species reproduction. In all these capacities, the living thing exhibits the internal teleology, the indwelling self-sustaining self-activity that nothing merely designed can display. By contrast, because an artifact possesses an inert design that has been imposed upon some separately given material by an external agency, it cannot comprise a self-realizing process, whose active inherently embodied form continually maintains its own activity.

Consequently, the internal functionality of life can hardly offer support for any "intelligent design" argument for the existence of God. Even if living species may arise through natural selection, no organism can possibly have the externally imposed design of an artifact, for which some intelligent maker may be invoked. Every one of an organism's cardinal features is incompatible with the external relation of form and matter generic to a designed artifact, whose material exists independently of the design with which its maker guides its production. The complementary functional differentiation of organic unity, the self-engendered process of growth and the assimilation of external material that this involves, the self-sustaining of the living organism, and the process of reproduction all involve an active organizational principle that not only realizes itself without any external agency, but realizes itself in a specific material that exists and arises only in conjunction with it. By contrast, the design of an artifact is given apart from the material in which it is to be embodied, which is why an external agency must be enlisted to impose that design upon the independently given material. Although an artifact's design may impose limitations upon which materials can embody that form with adequate functionality, the independent givenness of artifact design and material signifies that both need not be joined to one another. Not only may each suitable material embody some other design, but each design may have multiple embodiments in other suitable types of material. The relative indifference⁴⁷ of form and matter in an artifact is precisely what organic unity overcomes, removing the external arrangement every machine displays by consisting in parts that preexist their assembly into a functioning mechanism. The machine's functioning thereby does not join its parts together, but issues from an antecedent integration separate from the operation of the machine. By contrast, the organs of a living thing become differentiated in its own growth and development, where they arise performing complementary functions that sustain one another in sustaining the whole to which they belong. The specific matter of organs cannot be separated from the form of their interrelation, for the

content of each organ relates it to its counterparts so as to reproduce the unity joining them all.

This concrete connection of form and matter is so basic to life that neo-Darwinians can hardly ignore it. Dennett, for one, attempts to accommodate it by acknowledging that the controlling mechanisms of the nervous system are distributed so thoroughly throughout the body that alternate embodiments are virtually precluded.⁴⁸ A silicon transmutation would be just as inadequate a mind replicator as a brain in a vat, since both would lack the specific transducers and effectors that pervade every reach of the nervous system in the body. Teleportation, to take perhaps the most extreme example, would thus require transmitting complete “information” about the body in order for the same “mind” to be “beamed up” across intergalactic space.⁴⁹ Yet does it make sense to speak of “information” in respect to either body or “control system”? Dennett admits that Descartes was mistaken to treat the brain as the body’s master, for the brain is but one organ among others.⁵⁰ What Dennett does not recognize is that the organic unity encompassing the nervous system overcomes the efficient causality of any information processing, where “information” enters in as an independently determinate factor manipulated by a controlling mechanism which only acts upon something other than itself according to externally imposed rules. The complementary functionality of organs, the growth and development of the body, and the *self*-sustaining *self*-regulating unity of every organism all remain fundamentally incongruent with the extrinsic functionality of machines, which always serves an end realized in something else.

This incongruence applies just as much to the conditions of life where sentience is absent and only sensitivity remains. Hormonal and autonomous nervous systems may maintain bodily balances without sentience, as in sleeping or comatose animals,⁵¹ but these “vegetative states” still involve a self-relating self-maintenance that transcends the external direction of mechanical movement.

The active unity of form and matter basic to life thus calls into question not only arguments for intelligent design, but neo-Darwinian arguments for evolution rendering life forms artifacts of nature, consisting of natural machines built out of other natural machines. External contingencies may certainly figure in natural selection. Yet random mutations and the resulting competition for species survival only contribute to evolution by presupposing and getting integrated within the fundamentally undesigned and nonmechanical process of life.⁵²

Although the neo-Darwinian attempt to explain mind may stumble on these basic anomalies, its difficulties raise two important questions. First, can mind be construed in the terms that apply to artifacts and specifically to machines? And if so, can there be artificial minds with artificial intelligence? Or, second, must mind be embodied in a living organism? And if mental activity cannot be had apart from life, what must be true of a living organism for it to have mental activity?

CHAPTER 2

Mind and Machine

Whereas mind cannot be wholly immaterial, inanimate matter, as given by nature, lacks the teleological and self-active character evident in mental activity. By contrast, artifacts, whose matter is informed by design, seem to combine at least the material embodiment and purpose that mind must involve. If these features are not only necessary but sufficient for mental activity, two correlative possibilities emerge. On the one hand, mind could be comprehended in terms of an artifact, even if mind is possessed by a living individual who was born rather than manufactured. On the other hand, artifacts could have minds.¹

2.1 Can Artifacts Possess Mind?

These correlative options have captured growing interest in wake of the development of computers and the “artificial intelligence” they exhibit. Increasingly, mind is modeled along the computational lines of “thinking machines,” whereas cybernetic enthusiasts await the production of computers artificially encompassing the whole gamut of mental activity.

Yet both endeavors seem to founder on one basic lacuna: artifacts exhibit purpose because some artificer has made them, imposing design on some materials to endow them with their function. Artifacts therefore have a derivative purpose, ultimately issuing from a maker who exhibits an original purposiveness deriving from nothing else. Artificial intelligence thus presupposes an intelligence that is not artificial. Moreover, since that real McCoy determines what design to embody, its intelligence would have an independent ability to set ends that cannot be modeled on the conferred functionality of artifacts. This might allow artifacts to exhibit *some* of the goal-directedness of certain mental activities. Artificial minds, however, could never display a capacity for autonomous

determination of aims, whose possession by “natural” minds would prevent them from being exhaustively modeled after any artifacts.

This difficulty might seem circumvented insofar as artifacts can be produced by other artifacts, just as the latter can be produced by machines that produce means of production. Although one could reply that somewhere down the line, machine-producing machines must be designed by a nonartificial agency, neo-Darwinians like Dennett would counter that natural selection could blindly design natural intelligent organism-artifacts that have evolved to make machines, eliminating any need to appeal to an original intentionality to generate the derivative functionality of artifacts.²

Even if artifacts might somehow be generated without an intelligent maker transcending the functional capabilities of manufactured products, the question still remains whether artifacts can possibly feel, be conscious, or behave with linguistic intelligence. Artifacts certainly are embodied and purposive, but are these features enough for them to have or be a model for minds? The basic stumbling block is that artifacts remain mechanisms, even though they are designed and can perform functions. Indeed, it is because artifacts are materially and chemically ordered that they are susceptible to external determination, allowing them to be designed in the first place. What is crucial is that whatever design artifacts obtain beyond their physical and chemical composition is an externally imposed form that depends upon an independent agency for its imposition. Because an artifact’s design is the product of something else, the artifact does not order or move itself, but remains a mechanism in its own right, moving other things with indifference to their kind, while being moved in turn in the same way. Its design may give it a function, but that function is no more self-activating than anything else that pertains to the artifact in virtue of its form. To fulfill its function, the artifact must be used and this employment requires at least the furnishing of energy, if not a guiding hand. Moreover, an artifact does not repair itself like a living thing, but must be maintained by some external agency. In every case, what acts upon the artifact does so with an independently given nature that may at most exhibit the chemical affinity that some catalyst actuates, rather than the intrinsic complementarity of the organs of a living individual. Nonetheless, this contingent external activation does not result in motion of no import. Rather, it still enables the artifact’s function to be fulfilled owing to the design it has.

Accordingly, the functioning of an artifact will have a formal character. Whatever the artifact gets impelled to act upon in function of its design will be independently determined things, which will undergo alterations equally indifferent to what they are. Whereas the organs of a living thing function in respect to one another in virtue of their intrinsic interrelation, what artifacts affect is contingent upon an activating agency as well as the contingent presence of what

gets “functioned” upon. The form of the artifact’s functioning is therefore extrinsic to the content of what it alters.

Such formal functioning is paradigmatically manifest in calculation, where terms are externally manipulated according to laws that apply to them all, whatever they may be. Calculation “processes” factors given independently of the manipulation they undergo. Just as such factors can exist without being subject to calculation, so the process of calculation can operate upon other factors just as well. Calculation can apply to any information, so long as “information” has a content with no intrinsic connection to the lawful ordering to which it is subject. Calculation is mechanical precisely because it subjects its terms to connections that are extraneous to their natures. This is evident when calculation determines quantitative relations, which, as such, abstract from the qualitative character of what is reckoned. Similarly, logical calculation manipulates terms that serve as logical variables precisely because the ordering they undergo is indifferent to what they are, allowing for substitution of one factor by any other without affecting their purely formal logical relationships.

If artifacts are to have minds or be what mind is modeled after, machines provide the likely candidates since their functioning might better fit mental processes than the static presence of products that do nothing. Not surprisingly, computing machines have garnered most attention, with giddily expectant cyberneticists predicting satisfaction of Turing’s test, which would affirm the unity of artifact and mind by providing a computer whose communications would be indistinguishable from those of a “natural” person.³ Significantly, proponents of artificial minds have concentrated on developing “thinking” machines, rather than “feeling” or “conscious” machines. This is because the “thinking” in question consists of calculation, the purely mechanical operations that mind may sometimes engage in when reckoning figures or drawing formal logical conclusions indifferent to the individual meaning of their variables. Even here, however, it is questionable whether “thinking” machines compute in the same manner as a bona fide mind. The same limitations that distinguish the external teleology of artifacts from the internal teleology of living things render machines fundamentally disanalogous to mental processes, no matter how mechanical the latter may be.⁴

The key points bear reiteration. A machine, like an artifact in general, may be used to manufacture another. Yet no machine develops or assembles itself. It rather gets made out of preexisting parts by an external agency that imposes upon them the design providing the machine’s functionality. Moreover, instead of being self-activated, machines are set into motion, imparting their motion to other factors, as independently given as the elements out of which machines are constructed.⁵ Furthermore, the significance of a machine’s functioning is, as Charles Taylor puts it, “observer relative,”⁶ for what ends a machine serves

are not set by the machine itself. As Taylor points out, a computer's operation results in various outcomes, such as giving off heat, producing various sounds, generating different light patterns on its indicators and displays, increasing electric bills, and producing an output that can be interpreted variously as some processing of information.⁷ By itself, the machine cannot privilege any one of these outcomes. Only an external observer, with ends of its own, can determine that the computer's function consists in data processing, rather than heating the room, providing sound cues for meditation, giving a light show, or some other contingent use.

Accordingly, any attribution of "desires" or "impulses" to a machine is equally relative to what its user or designer intends it to do. That a machine is poised to carry out a certain function that requires certain inputs depends upon how its prospective movements serve ends that natural agents have decided upon. Of course, what these agents aim at is not relative to an external observer, but internally determined by their own intentions, which establish what matters for them, based upon their self-understanding.⁸

The observer relativity of machine functionality is due to the fact that machine manipulations, like reflex movements, are mechanistically triggered by antecedent conditions indifferent to goals. Whatever ends machine motion serves are external to its movement, whose determination from without always leaves it subordinable to extraneous aims. By contrast, action taken by a minded individual is intrinsically done with purpose and due account of the meaning that things have for the acting individual.⁹

Although individuals must have sentience and motility to engage in action, these are not alone sufficient. Purposive behavior cannot be motivated by "mere feedback from sense organs."¹⁰ In order for any "messages" to count as relevant "information" and influence action, the agent must further decide that they serve the purpose he or she has in mind.¹¹ This is possible because "receptor" and "effector" are here not coupled directly, as in feedback mechanisms, but instead have interposed between them the deciding element of will, with its chosen interests, concerns, and emotions.¹²

This holds true even when an individual engages in reckoning, logical deduction, or even the most mechanical "nonsense" memorizations where terms are rotely reproduced with express indifference to their meaning or syntax. Whereas a machine may go through the motions of calculations, an individual performs them as an action, employing mechanical operations with aims informed by the individual's own sense of significance. An individual calculates, deduces, or recites by rote with some purpose in mind, be it to arrive at some result serving some interest, to merely improve one's mechanical skills, or just to pass the time. A machine blindly exercises its artificial, mechanical "thought" because it has been instructed to do so.¹³ Natural individuals may sometimes

engage in blindly mechanical reckoning behavior, as when driving a vehicle while distracted by conversation or when subject to hypnotic suggestion. These instances, however, cannot remove the fundamental incongruity between the mechanical manipulations of “artificial intelligence” and the way an acting individual purposefully calculates, deduces, or recites by rote.

2.2 The Limits of “Artificial Intelligence”

The limits of “artificial intelligence” and of the reduction of mind to artifact are most evident when one focuses upon how a natural mind not just calculates, but engages in activities that transcend mechanistic manipulation entirely.

One is tempted to seek these activities first and foremost in “higher” mental processes that continue to elude cybernetic simulation. Conceptual determination, the core of linguistic intelligence and the very basis for theorizing about mind, revolves around relationships of universality, particularity, and individuality that cannot be reduced to reckoning. Whereas mechanistic “thinking” manipulates terms that are indifferent to the ordering to which they are subjected, universality always pervades the nature of its particulars. They may each have an individuality involving features indifferent to what they share in common, but their unity in the universal is intrinsic to them. To be particular, the individual must contain what makes it an instance of the universal through which it is united with other particulars. Far from being wholly external to the universal that subsumes them, particulars are the universal’s own differentiation, without which the universal cannot be an encompassing unity. In both these respects, universal and particular transcend the indifferent relationship of mechanism.¹⁴ Indeed, mechanism itself presupposes the intrinsic determinacy of individuality. Factors that enter into mechanical relations must already be individuated independently because their mechanistic interaction requires their plurality, yet remains indifferent to what distinguishes one factor from another. Individuality itself involves particularity and universality. What is uniquely determined cannot be defined from without, for an external factor that determines something can always subject something else to its determination. Not only may antecedently given “definite descriptions” apply to multiple instances, but any prior condition can wield its conditioning power on other things. To be unique, an individual must have a unity that pervades its differentiation, as the universal pervades the particular. External determination precludes individuation because what grounds something may ground other things in the same way. By contrast, what is individual is determined in and through itself, manifesting the self-determined character that universality exhibits in having particulars as its own differentiation.¹⁵

The incongruity between conceptualization and calculation is manifest in the persisting inability of thinking machines to theorize, to grasp the universal in the individual and determine its particularization. It is hardly any accident that, as Dreyfus observes, no one has any idea how to get computer networks or any other mechanism to generalize as required to simulate human intelligence.¹⁶ Dreyfus places the difficulty in the inability of computer architecture to respond to situations in terms of human-relevant features that allow for distinguishing what factors warrant grouping together and which rules to apply.¹⁷ Yet the underlying problem extends beyond situations where pragmatic considerations govern where boundaries are to be drawn.¹⁸ Because the mechanistic manipulation of computation operates upon inputs that must be susceptible to connections that are entirely extrinsic to their character, they are atomistic in character, lacking all inherent relationships.¹⁹ They therefore lack any basis for being subsumed under one universal rather than another.²⁰ For just this reason, they are subject *only* to lawful ordering, under which all “legal subjects” are equal and generic differences fall by the wayside. What their universal natures may be is completely extraneous to their lawful mechanical relations. Accordingly, computing machines may prodigiously manipulate terms in ways indifferent to what they are, but when intrinsic categorizations are at stake, the motions of reckoning prove futile.

This futility has long been recognized in the annals of philosophy.²¹ Plato early on highlighted the limitations of calculation in his discussion of the Divided Line, in whose ascending order calculating understanding is transcended by a thinking that frees itself of bondage to premises and given operations and instead conceives what is beyond assumption, intuiting ideas that develop freely from one another.²² Plato recognized that because calculative understanding operates with assumed starting points and given procedures it can never deliver any unconditioned knowledge. Accordingly, any attempt to universalize calculation and reduce reason to understanding is self-defeating, condemning its own claims to dependence upon unexamined premises.

Kant similarly exposed the futility of identifying mind and machine in noting how judgment, subsuming particulars under universals, cannot itself be rule-governed, since any rule for applying concepts would itself be in need of application, always leaving an ultimate subsuming beyond determination by any law.²³ Wittgenstein would later raise the same point in arguing that rules cannot govern all meaningful practice, since rules for applying rules must themselves be applied, inviting an infinite regress that can only be overcome by simply applying rules without the guidance of any rule.²⁴ There is thus no escape from granting place for immediate judgment, subsuming the particular under the rule or, more generally, the universal. Such ability to judge, Kant observed, is precisely what distinguishes intelligence from unintelligence, and this ability is

anything but mechanical. It cannot be imparted according to rules, nor does it operate as a law-governed activity.²⁵ Although Kant might seem to render what is not rule-governed something merely subjective and arbitrary, synthetic a priori judgments break that mold by bringing reason to particularize the universal necessarily, generating new content that remains entailed in the generality of thought. Such thinking, which establishes new knowledge by reason alone, cannot be a reckoning that manipulates given contents in a manner indifferent to their nature. Synthetic a priori judgment must instead achieve something no machine can duplicate, namely, determine something whose content is inherent in thought.²⁶

As Hegel observes, mechanical “thinking” always operates upon terms whose content is given and fixed.²⁷ This is because the formal manipulation of machine intelligence is indifferent to the content of what it orders, leaving that content both independently given and undisturbed by the operations to which it is subject. If concepts were of the rigid, atomistic, passive character of such inputs, no concept could relate itself to something other than itself, nor transform itself and give rise to new conceptual determinacy. Concepts could no more have any intrinsic connection to objects than connect themselves to one another. In that case, any philosophical quest for truth would be in vain, for thought would be hopelessly analytic, offering at best a static tool for sorting what is already contained within given terms. Thinking would then be incapable of generating any content or relations of its own. Instead, thinking would depend upon something beyond thought to supply concepts with any determinacy or ordering. Thought, to paraphrase Kant, would be empty. Knowledge would be restricted to empirical observation of things and the accepted usage of words, and universal necessary knowledge of this very predicament would be unattainable, since it would transcend the limits of both experience and an impotent reason. Conceptual theorizing, however, depends upon thinking ordering itself and upon concepts relating themselves to what they are not, transforming themselves in the self-active process whereby the universal (the concept as such) determines itself and thinking produces knowledge of its own. This autonomous reasoning is precisely what no mechanical thinking can provide. Because the reckoning of artificial intelligence imposes an external ordering upon independently given fixed inputs, thinking machines can never engage in the freedom of thought in which philosophy consists.

This freedom is exhibited in the contrast between the universality of reason and the particularity of any mechanism. As Descartes observed in his *Discourse on Method*, “while reason is a universal instrument which can be used in all sorts of situations, the organs of a machine have to be arranged in a particular way for each particular action. . . . It follows that it is . . . impossible that there should be enough different devices in a machine to make it behave in all the occurrences

of life as our reason makes us behave.”²⁸ Although a modern computer might be able to respond to a vast array of different data, it still remains bound to some set of instructions, as well as to whatever inputs are fed its way.²⁹ By contrast, autonomous reason has a protean adaptability enabling it to abstract from any situation and framework and to determine what problem to pursue, as well as how to go about its investigation.³⁰

2.3 Philosophy and the Discrepancy between Real and Artificial Intelligence

The distinctive quandary of philosophical investigation presents this discrepancy between real and artificial intelligence in the most radical fashion. Unlike other disciplines that investigate a given subject matter with a presupposed method, philosophy must question both what it should investigate as well as how it should proceed. No given “inputs” nor given “instructions” can be taken for granted if philosophy is to escape dogmatic acceptance of privileged contents and procedures and the relativity to which this acceptance condemns any resulting claims. Machine intelligence, however, can only ask questions for which it has directly or indirectly been programmed and can only manipulate fixed, isolated contents that it receives from without according to the protocols of its design. Even if that design allows for successive modifications of operations through parallel processing, the whole movement is still predicated upon the provision of given inputs and certain algorithms governing the “learning” process. Whether serial or parallel in design, thinking machines remain bound to external determinations that condition all their results and thereby preclude the critical freedom of rational autonomy.³¹

Yet, every thinking machine points beyond its own limitations. The programmers who give computers their instructions, as well as the hardware engineers who design programmable circuitry, therein perform activities that cannot be wholly subordinate to nor contained within the rule governed operations with which they endow artificial intelligence.³² Programmers and hardware engineers may make use of algorithms in implementing their designs, but they must act in some creative, very unmechanical way to come up with their program and circuitry designs in the first place. Moreover, programmers must translate meaningful statements into the inherently “meaningless discrete bits” upon which computers operate,³³ just as users must interpret computer output, imparting to mechanistically determined results significance that depends upon an independent understanding of certain contexts and interests. None of these engagements of mind can be equivalent to the external operations of information processing, which abstract from the nature of what they manipulate. Even

though Chomsky and transformational linguists may have formalized the ability to distinguish grammatical from ungrammatical series of words, their formalization is indifferent to the particulars of linguistic performance, by which particular sentences get used in particular occasions based on how interlocutors understand their situation.³⁴ No machine can duplicate that aspect of linguistic competence, which depends upon the intrinsic connections of meaning that concepts provide. Similarly, as much as transformational grammar may allow for the general adaptability of language, its formal rules cannot determine what new meanings should be coined or what new analogies should be invented. To do either intelligently requires more than blind machine manipulations or brute hammerings by monkeys at a keyboard.

Finally, the very theorizing of cyberneticists transcends the limits of their own doctrine. As Jonas points out, if any proponents of cybernetic doctrine were asked to justify their own theory, they could hardly appeal to the blind cybernetic necessities of “feedback, circular loops, and automatic control.”³⁵ Instead, the proponents of artificial intelligence would have to admit that they subscribe to their conception either because they hold it to be true or believe it to serve some ends they have chosen to pursue.³⁶ In so doing, the cyberneticists invalidate their own theory, which renders theorizing something completely determined by thoughtless necessitation, depriving it of any means for establishing its own validity.³⁷

2.4 Mental Self-Activity versus Machine Feedback

These anomalies all indicate how the autonomous theorizing of reason, the acme of linguistic intelligence, involves something shared by every dimension of mind that no artifact, let alone any computing machine, can simulate. This is the self-related activity that pervades the feeling of the psyche, the intentionality of consciousness, and every engagement of intelligence, whether it involves intuition, representation, or thought. Because artificial intelligence is mechanistic, and mechanism is externally, rather than internally, moved, no computing machine can engage in an activity that acts upon itself. Yet, at every level of mind, such self-activity is constitutive. The psyche feels its own feelings and cannot have any without doing so. Consciousness cannot have its constitutive subject-object polarity without relating to its own mental content as a determination of a unitary domain from which it has extricated itself and to which it opposes itself. Similarly, intelligence cannot intuit, represent or think without relating to its intuitions, representations or thoughts as both its own subjective modifications as well as determinations of something objective. In each case, what mind is is a function of how mind acts upon itself.³⁸

To the extent that computing machines lack this self-activity, they cannot themselves relate their operations to anything they may allegedly be about. Computers may generate outputs from inputs according to embedded rules of operation, but this movement does not of itself make knowledge claims and distinguish between appearance and reality. Only an external observer can determine how computer operations relate to something beyond themselves and confer both meaning and reference upon them. Even if inputs determined by outer circumstances get processed in a certain manner time and again, the causal relation between external inputs and outputs cannot secure any reference for those outputs. That certain outputs follow from certain inputs, given a certain processing function, no more makes the output signify that input than a sneeze resulting from the sight of cows thereby acquires an intentionality rendering it not just a sneeze, but the sign of a cow.³⁹ This absence of any intrinsic reference is true even in the most basic calculation. The movements of machine computation may replicate in some analogous manner the quantitative properties of the objects whose relationships are being calculated. Yet the computation does not itself specify that it is so analogous and so representative of any objective state of affairs.⁴⁰ This is why operators must be enlisted to encode input and decode output, performing an activity irreducible to any computation, yet basic to any natural, living mind that reckons about its world. The same predicament holds true of so simple a mechanism as a scanner. It may produce a pattern from suitably arranged serial impulses, but the scanning does not pick out the pattern—only a viewing observer can actually decode this result and note *what* has been scanned.⁴¹

In every case, mechanisms, be they scanners or full-fledged computers, can only serve to refer to something by deriving intentionality from agents who, through their independent encoding and decoding activity, connect the causal operations of these machines to what they thereby come to be about. For this very reason, it makes no sense to reduce mind to artificial intelligence, for computers can only be “thinking” machines that reckon about something by having a derived intentionality endowed by minds with a nonderivative, observer-independent, intrinsic intentionality.⁴²

Because a mechanism lacks the self-relating activity to connect its own operations to anything else and relate to that connection, a machine may malfunction, but it cannot make mistakes.⁴³ To fall into error a computer would have to misjudge the appropriate relation of one of its own outputs to something outside it, but no computation can ever independently make the leap from causal relation to intentional reference.

Machine feedback might be thought to simulate at least some of the self-activity generic to mind, but mechanical feedback is something altogether different. A thermometer does not feel heat, nor does a thermostat enable a heating

system to be conscious of its own performance. A thermometer may transmute heat fluctuations into the movements of indicators, but their movement is not further registered by the thermometer itself. Similarly, a thermostat may transmute temperature changes into movements of indicators that trigger heating or cooling cycles, but each movement acts upon some other part of the mechanism, rather than itself.⁴⁴ Even when a computer performs calculations that precipitate further calculations that do the same in a continuous feedback loop, each further information processing follows from an antecedent engagement and leads to another in turn. However alike their calculations may be, each successive operation is still a different engagement from those that precede it. Some portion of the output may “return” to regulate some aspect of further input, but output and input stay distinct. What every operation acts upon remains something other than itself, just as what precipitates each engagement is another calculation. Self-relation remains nowhere to be found.⁴⁵

This is true even when machine operations cannot continue without the constant regulation of a feedback mechanism. For example, unless pressure regulators continually cause proper adjustments to be made, a steam engine may blow itself up. Nonetheless, every such regulation remains distinct from the movement whose monitored pressure results in further adjustment. Not only does self-activity never occur, but mechanical feedback never *refers* to the functions it monitors. While feedback may affect further functioning, it never is *about* what causes those changes. It simply comprises a causal loop. As Kenneth Westphal has put it,⁴⁶ feedback is all syntax with no semantics. For these reasons, mechanical feedback cannot endow machines with either consciousness or self-consciousness. A thermometer is no more conscious of heat than a thermostat renders a heating system self-conscious of its own functioning.

Self-activity, as well as reference, remain just as absent when a computer monitors some of its own operations. The monitoring may generate calculations that follow from those that are registered, but that causal outcome does not render those results *about* what produces them. Moreover, as Charles Taylor observes, the operations monitored are independent of the monitoring.⁴⁷ That independence still holds if the monitoring causes other operations to be performed that impact upon those that are being monitored. Whatever such resultant effects, the monitoring remains a different operation from that which it monitors. Such difference is unavoidable in thinking *machines*. Because the computer is a mechanism, regulated by the external force of efficient causality, a hard and fast distinction persists between the object of monitoring and the description of it provided by the monitoring. A computer’s monitoring has no intrinsic connection to the operations it monitors. Whatever operations the computer performs can always proceed apart from being monitored, just as the monitoring activity can always apply to something else.⁴⁸

By contrast, mental self-activity cannot be separated from its object.⁴⁹ This applies as much to the perception of pain as to the self-understanding ingredient in emotion. We can no more distinguish between pain and the perception of pain⁵⁰ than we can ascertain our own state of emotion independently of the way we describe ourselves.⁵¹ Pain has no existence apart from psyche's feeling of it, just as how we understand our situation and our goals determines our emotions, which cannot be felt apart from that understanding. Since we feel an emotion in view of how we comprehend our circumstances to affect our aims and desires, clarifying an emotion transforms it.⁵² Spinoza made this insight the basis of his strategy for us to take control of our emotions⁵³ and it underpins the therapeutic approach that aims to lessen emotional turmoil by making explicit our understanding of our feelings.

Computing machines cannot exhibit any such distinction between implicit and explicit understandings as becomes manifest when real agents come to recognize that they failed to understand what they were feeling.⁵⁴ What was implicit in an emotion can become explicit in the experience where one comes to a new self-understanding, modifying how one feels about one's practical predicament. Artificial intelligence can never involve such revelations. Because computation acts externally upon its inputs, which are given as independently determined factors,⁵⁵ their identity cannot be altered by how they get processed. The results of the processing may vary according to what other inputs and rules are brought into play, but the different outcomes cannot change what the inputs are in themselves.

Machines, however, are not unable just to have emotions. What renders emotions beyond the ken of computers pertains equally to every form of awareness.⁵⁶ Feelings are what they are in function of how the psyche feels them. When, for example, the psyche becomes habituated to similar feelings through repeated registrations, the feelings lose their immediate hold on the psychic field and become sequestered contents from which the psyche can turn its attention. Similarly, when mind is aware of an object, that object is determined by how consciousness relates to its mental determination. If consciousness relates to its content immediately, it senses something that is with no further qualification. If instead consciousness takes in what it senses by relating aspects of its sensible manifold to an underlying substrate, it perceives a thing with properties. Or, alternately, if consciousness treats these properties not just as possessions of things, but as dynamically determined, it apprehends a nature governed by lawful forces. In each case, mental content has an intrinsic connection to mental activity.⁵⁷

This intrinsic connection is just what is absent from every mechanical processing of inputs by thinking machines. What gets acted upon is always given independently of the operation performed upon it, just as each operation func-

tions apart from those that precede it. Consequently, it is pointless to attribute any of the reflexive features of mind to machines. Computers can no more feel than be conscious or have desires or emotions. To the extent that being a willing agent requires all these self-active functions of mind, robots will never qualify as persons, to whom rights should be ascribed.⁵⁸

Admittedly, mechanical computations might retain some place in the realm of human performance if they can be employed by reflexive behavior to yield genuine action.⁵⁹ Yet even then, no machine would itself be able to act, nor would mind be reducible to an artifact, nor would intelligence ever be purely artificial.

These ramifications preclude the sort of "functionalism" in psychology that invites us to imagine how mind could be detached from any neurological embodiment and realized instead in automata.⁶⁰ It may well be that computing machines of a very different physical construction may run the same program and perform identical functions of information processing. Yet this does not signify that mental functions are indifferent to their embodiment unless one reduces the activities of mind to computation. This has been the governing assumption of functionalists like Fodor, who derive the irreducibility of psychology to physics by reflecting upon computing machines and how the same calculations can be performed using mechanisms of different materials and architectures.⁶¹ Certainly, mind may be irreducible to physical processes both mechanical and chemical in character. Yet, because mind is equally irreducible to artifacts in general and thinking machines in particular, determining mind's connection to neurological process requires a more basic investigation: that of mind's connection to life.

CHAPTER 3

Mind and Life

Mind must be embodied, but it cannot be merely mechanical or chemical in nature, nor be just an artifact. This suggests that mind must be alive, necessarily comprising a living organism.

3.1 The Possible Connections of Life and Mind

If mind is intrinsically bound up with life, two different options remain possible. On the one hand, mind may be endemic to life, such that all organisms possess mind in varying degrees. Alternately, although mind must be alive, not all life forms need have mental activity. Experience suggests the latter alternative since mind appears present only in animals. They seem minimally distinguished from other life forms by possessing sensibility and irritability, the latter comprising how sentient organisms respond to what they sense, not as efficiently caused by antecedent stimuli, but as moving themselves in needful fulfillment of the constitutive life functions of nutrition and reproduction.

But can mind be restricted to animal organisms, allowing nonanimal life to be without mind? In *De Anima*, Aristotle challenges this possibility by identifying the psyche as the principle of life per se. Although Aristotle grants that different life forms have psyches of different endowments, all share at least the nutritive soul to which plants appear restricted. This nutritive soul provides the animating principle of the three basic features common to all living things: (1) the organic unity by which the living thing is composed of organs fulfilling complementary functions sustaining the whole to which they intrinsically belong, (2) the process of nutrition and growth whereby the organism assimilates

inorganic and/or organic material from its environment, uniting that external material with itself so as to continue its life activity, and (3) the process of reproduction, whereby the organism upholds its species being by generating other living things of a related kind.¹

Aristotle's claim that the psyche is the principle of life only challenges the restriction of mind to animals if the "nutritive soul" is genuinely mental in character. But is mind intrinsically present in the three basic functions of life to which Aristotle connects the "nutritive soul"? All of these functions exhibit a type of self-activity transcending the limits of inorganic process. By serving as both means and ends of one another's functioning, organs sustain a whole that continuously acts upon itself, a whole that figures as an end in itself in its self-sustaining life process. Similarly, the organism assimilates external material in virtue of its own self-subsistent nature, which imparts the same life activity to what it absorbs. And in reproduction, the living thing generates another of its own or a related kind by driving itself to use its own living material to transcend its individuality and sustain its own or a related universal species being. In any of these life processes, however, is the self-activity sufficient to comprise specifically mental activity? This question must be answered to determine whether there can be life without mind, as well as whether mind must be bound up with animal life.

3.2 The Fundamental Processes of Life

Life's primary feature, upon which depends the living thing's interaction with its environment and reproduction, is organic unity. That unity incorporates mechanical and chemical processes, but transcends both them and the functions of artifacts. Whereas mechanical motion and chemical reactions proceed from some external impetus, organic unity comprises a self-actualizing process, sustaining itself by its own activity.² It does so through internal organs that fulfill complementary functions maintaining one another as well as the whole of which they are intrinsic components. Unlike a mere aggregate of material particles that has no nature of its own, the organism maintains an irreducible identity by associating its elements in virtue of their differences.³ The living organism still retains a material body with mechanical and chemical processes. As organic, however, it manifests over and above its physical materiality a unity involving further, specifically biological determination.⁴ Whereas impacting particles or reacting chemicals undergo alterations that always lead beyond themselves, each organ figures as both a means and an end, serving to sustain its counterparts just as they function to sustain it in turn. In so doing, they together maintain the entire organism, whose active unity is immediately produced anew by their correlative operations, in distinction from the surrounding environment. This

allows organic unity to figure as an end in itself, functioning for the sake of its own coalescent activity.⁵ Its constituent organs do not exist as such separate from the organism. Instead of being assembled by some external agency like an artifact, as enthusiasts of intelligent design would imagine, organs can only develop within the life process of an individual to which they belong in common.⁶ Unlike parts, organs have essences relative to the whole organism to which they belong and can realize their own perfection only in fulfilling their role within the living thing.⁷ Accordingly, the sustenance or health of the organism is not a function of any single organ within it, but becomes jeopardized if the activity of any organ gets subordinated to another, disrupting the harmony of the complementary functioning of all organs together.⁸

As such, organs do not comprise composites with a matter given independently of their form, as is characteristic of artifacts. The material and configuration of organs arise together within the life process of the living thing in conjunction with the complementary functioning of their counterparts. Organs are internal differentiations of a concretely universal unity that contains their differences within itself, such that in maintaining its identity, the organism preserves all its organs in their specific existence. These organs are intrinsically connected to the life process of the whole. If they get detached by some external contingency and are not reintegrated into a living being, they therefore degrade into lifeless matter, governed *entirely* by mechanical and chemical processes and no longer capable of upholding a self-sustaining integrity resisting the effects of external forces.⁹ Once organic unity is disrupted, what is left are mechanical relations indifferent to what they connect and chemical reactions contingent upon external catalysts, allowing random disintegration or assemblage of preexisting parts following an extraneous blueprint.¹⁰

Unlike the parts of an artifact or a natural inanimate object, the organs of the living thing produce one another with respect to both their form and their combination into the whole to which they belong.¹¹ If they only produced each other's form without combining together, or alternately, only combined with one another without thereby producing their respective forms, some external agency would be required to assemble the organism from its components or to form them. In either case, the whole would be reduced to a lifeless artifact, lacking the power to form and unite its constituents.

The parts of a mechanism may move one another in function of a design where, for example, one watch gear's motion is for the sake of moving another. Yet, as Kant observes, mechanical parts are not *produced* by one another, nor does a watch alter its functioning to compensate for a damaged part or repair itself with new parts, nor does one watch produce others by employing and organizing further material. All these functions depend upon an agency lying outside the mechanism, whereas life has not just motive, mechanical force, but the

indwelling formative power to maintain its own self-active nature, as well as reproduce it.¹² Only thanks to this its nonmechanical, internally self-unifying, and self-constituting process can the organism possess an intrinsic, concrete unity determining not just the combination of its parts, but their specific natures.

Nevertheless, because organs are physiological entities composed of material with mass as well as chemistry, they have physical relationships in which mechanical and chemical processes unfold. Precisely because these processes are externally conditioned, they are susceptible to subordination as means to other determining functions of a different character. That the material constituents of the organism are each determined from without in no way prevents the whole to which they belong from being a self-sustaining entity, which upholds its own unity in relating to its environment. Indeed, if the constituent components were not themselves externally determined in mechanical and chemical processes, but internally self-moving, they could not be integrated as organs of an organism. Instead, they would comprise tumors whose independent growth disrupts the organism, parasites who slowly feed on the organism, or symbiotic organisms who sustain themselves in aiding their host. Mechanical and chemical processes can instead suffice because all that life minimally requires is that the external determination to which its components are subject result in some physical periphery separating the whole from what lies without, while combining into an internal process that renews itself and the encompassing covering that sets it apart as an independent self-sustaining individual.¹³ In this way, to paraphrase Kant, the connection of efficient causes endemic to mechanism can serve a determination through final cause,¹⁴ where something as a whole functions for its own sake. This, of course, is just what occurs within the living organism, provided one understands the final cause to be internal to the living thing, rather than an external end realized through an exercise of art.

Aristotle goes astray when he tries to capture the process of the organism by appealing to art, comparing the self-sustaining process of life with a doctor who exercises his healing craft upon himself.¹⁵ Health may need to be artificially restored by the doctor when the natural harmony of organic unity gets disrupted. In that case, knowledge of this harmony is needed before health can be restored. Then, however, as Michael B. Foster points out, the restoration of health presupposes more than an organism's complementary functioning of its organs. The doctor's treatment of himself involves further the guidance of medical reason, which, by having to regulate the workings of the whole body, cannot be the function of any organ, which always concerns a merely particular operation.¹⁶ The doctor's intervention upon his own health is therefore fundamentally incongruent with the workings internal to organic unity. Not only is the self-healing art of the doctor not part of the activity of the healthy organism, whose harmony

it restores, but the original health of the living thing derives from a parent rather than an artificer.¹⁷

Since organs are intrinsic to a living thing, their mechanical and chemical aspects are subordinate to a life process whose self-renewing animation is irreducible to the externally conditioned movements and reactions to which mechanism and chemism are limited in and of themselves, and to which artifacts are confined in service of an externally imposed design. Although each part of the living thing exists as a result of mechanical and chemical processes in the workings of the other organs, each organ equally operates for the sake of the others and of the whole organism.¹⁸

Conceiving this subordination of mechanism and chemism within life does not pose the dilemmas that Kant bewails in relegating the concept of life to a regulative idea guiding our reflection upon experience, while restricting objective knowledge to mechanistic process. For Kant, life can be thought in either of two ways, each as paradoxical as the other. On the one hand, conceiving life requires endowing matter with a property of self-organization that conflicts with matter's conditioned, mechanistic nature. On the other hand, thinking life entails conjoining to matter the fundamentally alien principle of soul. In that case, the living thing will no longer be a natural product, but become an artifact the soul fashions by imposing its form upon matter. The only alternative, Kant claims, is to have the soul use the body as its instrument, but to let the body already be organized matter, rather than a product of art. Then, however, the question is begged, for life is presupposed rather than explained.¹⁹ What Kant fails to recognize is that the supervenience of life upon mechanical and chemical processes neither violates their operations nor subjects inanimate material to a fashioning where a separable form is imposed upon it by an external agency. Instead, the conditioned character of mechanism and chemism is retained within a self-renewing process that puts mechanics and chemistry to work in the complementary functioning of organs whose operations continually sustain the unity of the living thing. There is no incompatibility because what makes the living thing's matter move and chemicals react are other motions and chemical reactions which together build a self-sustaining whole that never needs more than them for its continuance. The encompassing process thereby endows its components with a new form of activity without requiring the introduction of some contradictory factor violating physical laws or chemistry. The "nutritive soul" is just this self-sustaining activity in which the emergent organic unity consists.

If Kant's problematic alternatives were final, not only would life be incomprehensible, but mind could never be known to be embodied in a living body. Since this would leave mind banished from objectivity, mind could never be an *object* of knowledge, consciousness could never have itself as an object, and

individuals could never experience other selves. As a result, Kant would never be able to show how mind could be known, how self-consciousness could be possible, or how moral subjects could actually inhabit a kingdom of ends and act morally with one another. Yet, Kant himself introduces much of the distinctive determinations allowing life to be known, just as in describing sensibility, understanding, and reason he comprehends the noumenal self that he otherwise declares beyond the fold of knowledge.

Far from being waylaid by Kantian incoherence, the intelligibility of life, and with it, the conceivability of how life and mind are connected, are manifest in how the subordination of mechanism and chemism pervades the two other constitutive processes of life: the metabolism by which the living thing biologically interacts with its environment and reproduction.

Insofar as the living thing is composed of matter and specific chemicals, it is subject to external causality both mechanical and chemical. The organism cannot escape being affected by gravity as well as the mechanical impulses of other objects that communicate motion to it. Similarly, whenever the organism is brought into contact with other chemical substances and appropriate catalysts, it is subject to the chemical reactions that follow from these circumstances. Yet, because the living thing has an organic unity, sustaining its life process as an end in itself, it must uphold its self-renewing functioning in its relation to its environment or cease to be alive. Instead of relinquishing its purposive self-activity by becoming completely determined by the external contingencies of mechanical impulses and chemical reactions, the living thing remains alive by using its mechanical and chemical interaction with its surroundings to maintain its life activity.

Moreover, the very process of organic unity involves a continual activity overcoming the static inert self-identity of lifeless matter by consisting in internal transformations that nevertheless maintain the encompassing individual active form of the organism. For this to occur, the organism must engage in some exchange of material between itself and its environment. Without such exchange, the organism can no more comprise an ongoing internal process than uphold its active unity in face of the mechanical and chemical influences of the external world.

Jonas suggests that this metabolic exchange must apply to the entire material of the living thing, such that the active form of life involves a transcendence of all its matter, which is continually being replaced.²⁰ He acknowledges, however, that modern biology has confirmed that within each cell the genetic material of DNA remains materially unchanged (with the exceptions of alterations due to mutations or damage) and that within multicellular animal organisms the controlling cell network comprising the nervous system does not regenerate like other cell groupings. Although much of nervous system cells' own cellular material may undergo metabolic exchange, their nuclear material remains by and

large constant throughout the life of the organism. This persistent core does not, however, alter the distinguishing feature of metabolism, that the individual active form of the organism sustains itself through some continuous exchange and assimilation of material with and from its environment, in contrast to the fixity of lifeless things, whose alterations are externally determined contingencies.²¹

Accordingly, the metabolism necessarily ensuing within each organism involves something more than the mere mechanical or chemical relations it contains. Whereas these relations are contingent upon external conditions, metabolism is intrinsic to the living organism. By its very nature, the living organism engages in very specific physical relations to its environment, which serve the purpose of sustaining its life. Unlike mechanical interactions that are indifferent to both the kind and import of the objects involved, metabolism operates in function of the organism's survival. Only living things have metabolic relations to their environment, which is unsurprising in view of how the metabolic process continually renews itself in virtue of the nature of the organism.

That nature is animated and not merely informed, as an artifact embodying a passive form, dependent upon an external artificer for its production and repair. Because the "form" or nature of the organism instead wields the power to sustain itself, the organism possesses the power to subdue matter to its own nature, as exhibited in the assimilation of nutrients.²²

Although chemicals might seem similarly "primed" to react in a certain manner, their reactions differ from metabolism in several key ways. First, chemical reactions only occur on the basis of external contingencies providing contact with other appropriate chemicals and the catalysts needed to facilitate their reaction. Second, a chemical reaction neither renews itself nor sustains either of the participating reagents. The reagents end up transformed and the products of the chemical reaction cannot spontaneously renew the chemical process from which they result.²³ By contrast, an organism not only sustains itself through metabolism, but thereby enables itself to continue engaging in the metabolic process.²⁴ Moreover, the materials with which an organism interacts metabolically are assimilated into it, taking on the same self-sustaining character of living material that the organism comprises. Absorbed as inanimate material,²⁵ what gets assimilated receives a completely new animate character that no mechanical impetus or chemical reaction can alone provide. As Kant puts it, the living thing here imparts its own indwelling "*formative force*" to matter that lacks it, thereby endowing the latter with an animate self-organization whose attainment can hardly be explained by any mechanical ability of one thing to move another.²⁶ To be set in motion or chemically altered may give material new extraneous attributes by which it moves something else or stands primed to react with other chemicals. It cannot, however, render something a living thing that, in virtue of its own nature, sustains or, for that matter, propagates itself.

Similarly, it would be a mistake to confuse the exchange of material in metabolism with the inflow of fuel into a machine and the outflow of waste or the input of data into a computer and the output of processed results. In every case of machine functioning, inflows and outflows or inputs and outputs pass through the mechanism without essentially entering into the machine parts in whose operation they are involved. Not only are any changes to the machine's matter incidental effects of wear and tear, but the machine parts remain the same whether they stand still without fuel or inputs or are set into operation thanks to these additions. The physical substance of the machine does not itself undergo the transformations to which its fuel or inputs are subjected. Accordingly, the "feeding" in of fuel or input only occurs due to some extraneous agency, rather than being something the machine does on its own. By contrast, metabolism is essential to the very being of the living organism. A living thing needs no external impetus to assimilate material from its environment and expel what cannot be incorporated into its life process. To be alive is to metabolize. For this very reason, the metabolic exchange of material pervades the living organism, rather than being restricted to an outer periphery that leaves what lies within unaltered.²⁷ The "subject" of metabolism, the living individual, is both the agent of the assimilation and that whose own living material undergoes its own continual renewal in the metabolic process. Because metabolism is inherent to life, if metabolic exchange ceases, the living organism cannot remain the same, like an unfueled machine. Once metabolism shuts down, the living thing either becomes dormant, as does a spore that suspends its life functions within a protective shell until favorable conditions allow their resumption, or the living thing dies, losing its self-sustaining character and becoming inert material, wholly prey to external mechanical and chemical determination.²⁸

Accordingly, metabolism is not, *pace* Descartes' mechanical explanation, a combustion process wherein food consumption comprises a fuel-burning providing kinetic energy to move the body of an animal. Machines may be run by combustion, whose heat moves parts manufactured and repaired independently of that fuel consumption. Food, however, not only provides energy to the animal organism, but gets absorbed by the body to replenish its organs and allow for growth. As Hans Jonas observes, fuel may allow a machine to run, but it neither originally forms nor replaces the parts of the machine. Metabolism, however, is the "constant becoming" of the living organism, whose becoming is itself the continual self-sustaining functioning of the life process.²⁹

Consequently, the growth that accompanies metabolism, at least during certain periods of an organism's life, is completely different from an increase of size determined by mechanical laws.³⁰ Unlike balloon inflation, tidal fluctuation, stellar expansion, or the "growth" of crystals,³¹ a living thing grows by processing and absorbing external material in such a way as to give it the specifically

biological actuality of an organic unity that preserves itself through a reciprocal functioning of organs and a metabolism with its environment. Kant may consider this working equivalent to generation,³² but it differs from procreation in two important respects. On the one hand, growth incorporates externally given inanimate material into the living organism, sustaining that individual in so doing. On the other hand, growth imparts upon that assimilated material the active form of life, the same life of the individual that incorporates that material. By contrast, reproducing organisms employ living material of their own to produce another independent organism of a related kind.

Nonetheless, the transcendence of mechanical and chemical determination is equally manifest in reproduction. What emerges through propagation is not the effect of a cause indifferent to kind or import, or a result chemically distinct from the chemicals that have reacted to produce it. Instead, the offspring is of a kind related to its parent and just as much an organism engaged in seeking to sustain itself. Reproduction may enlist mechanical and chemical processes, but these contribute to a specifically biological generation, where an organism, either in asexual isolation or in sexual interrelation, gives rise to another of the same or hybrid related species.³³

This does not involve imposing a separable form upon inanimate material in some exercise of making (technique). The propagating organism rather relinquishes animate material of its own that develops into a whole independent living thing of a related type. To fashion an artifact, artisans must know the antecedently conceivable form that they impose upon some independently given material. Accordingly, an artifact is definable in terms of the form it embodies in common with other products of the same design. That form is passive and abstract in that it does not actualize itself, but requires the agency of an artisan to realize it in a separately preexisting material, whose individuating features are left undetermined by the form it receives. By contrast, to generate offspring, parents need not know or will what they reproduce but must *be* of a related species. Whereas artisans do not impose their own form on their products, parents do impart their own nature to their offspring.³⁴ That imparted nature possesses the self-realizing activity that no artifact can exhibit precisely because the artifact, as made, embodies a passive form, which requires an external agent for its imposition as well as its maintenance. Insofar as the organism is reproduced rather than made, it cannot have the intelligibility of an artifact, an intelligibility residing in the embodied, passive, and abstract form that leaves unspecified everything that individuates products of the same design. This does not mean, as Foster suggests,³⁵ that offspring's efficacious nature renders them unintelligible and that comprehension is limited to artifacts. Admittedly, living things do not have a blueprint or common abstract form by which they can be defined. Each organism may have a genetic code, but this does not function as an embodied form or

design. The same genetic code is present in all the organism's cells, irrespective of their specialization, and throughout the life of the organism, no matter what morphological changes it undergoes in maturing. Consequently, that code cannot independently determine the organism's internal differentiation or dynamic development. The genetic code instead figures as a subordinate element in a self-constituting whole that activates different parts of that code in terms of the encompassing life process of its ever developing individual organism.³⁶ If this transcends the intelligibility of artifacts, it does not prevent offspring from being comprehended in the very different terms of living material, which actualizes itself as an independent organism once its parents have provided the embryonic seed that transforms its own material and form in developing into an adult.

Given how the living organism upholds itself and its species being through its metabolic and reproductive functions, life is always resisting entropy and its tendency to increasing disorder.³⁷ This could seem to contradict the laws of thermodynamics and particularly the second law, according to which entropy can only increase. Because life continually sustains its own self-ordering organization, it readily appears in fundamental opposition to this second law of thermodynamics, which, according to the Boltzmannian interpretation of entropy as molecular disorder, mandates that molecular disorder can only increase until it reaches its limit of total disorder. As Popper points out, however, the laws of thermodynamics apply to a closed system, such as the totality of nature, whereas the living organism is always an "open system" insofar as it exists within an external biosphere, with which it interacts.³⁸ Consequently, although life may continually resist entropy, this need not violate the entropic tendencies of the universe within which life is situated. The laws of thermodynamics therefore do not preclude life. Rather, they preclude the hylozoism that would render *all* nature alive. In other words, life must proceed within a world containing inorganic as well as living things.

3.3 Organic Unity and Psychological Subjectivity

All the above processes present an irreducibly biological self-activity, but do they contain anything intrinsically psychological, imbuing life as such with mental activity? Or is Aristotle's invocation of a "nutritive soul" as the principle of these life processes psychologically empty? Is a "vegetative" state with nothing but these biological functions a life without mind?

Of key importance in resolving these questions is that the active unity of an organism is immediately identical to the complementary functioning of its

organs. Although these organs sustain the whole as a self-renewing process, they each fulfill a merely particular function. No organ directly realizes as its end the unity of the entire organism. Instead of aiming at this encompassing concrete universal, each aims at performing the specific operation to which it is bound by its particular physiology. Because the unity of the whole consists in and is continually maintained by the complementary particular functioning of its organs, this unity is nothing but their process. No further activity or factor mediates between the whole and its organs. Consequently, the organism, simply qua organic unity, contains no reflexive activity where it acts upon itself *as a whole*, ordering itself from a central agency whose function concerns the organism in its entirety, rather than a particular operation in a particular part.³⁹

Yet just such reflexive agency is fundamental to every level of mind. The psyche feels its own feelings, registering as a single self the psycho-physiological modifications of the entire organism which it encompasses. There is no "binding problem" for the psyche, as if *feelings* (as opposed to nerve impulses) emanating from different sense organs needed to be subsequently connected to provide a unified sensibility. Because the psyche is *a feeling subject*, it relates to itself as a unitary psychic field, whose sentient centrality registers at once *all* its simultaneous feelings in and through the body in its entirety. They are felt not as feelings of particular parts of the psyche, but as feelings of its unitary feeling self.

Similarly, consciousness always apprehends a unitary objective world given to its unitary awareness, projecting the content of its psychic field as an objectivity confronting its subjective standpoint as a whole. Even in perceiving its own body and its worldly interaction with others, mind is not conscious as a collection of particular functions devoid of any overarching reflexivity. Rather, consciousness always has an intentional unity within whose horizon all objects appear, just as self-consciousness always involves a standpoint for which all self-manifestations join together.

Intelligence is no different. Whether intuiting, representing, or thinking, mind retains an underlying subjective unity, relating to itself in all its mental products and in all their reference to a common world. What intuits is always the same mind that represents and thinks, so that intuitions, representations, and thoughts are present for one and the same intelligence.

Moreover, insofar as consciousness presupposes the psyche, just as intelligence presupposes both the psyche and consciousness, mind remains related to itself in its totality, even when focusing on certain items in its respective fields of feeling, perception, or imagination and thought.

By contrast, the immediate identity of the particular functioning of organs and the unity of the living thing to which they belong lacks any distinguishable activity that relates the organism to itself as a whole so as to comprise an indwelling focal point, a live subjective centrality, that could differentiate itself from its

physiological organization as a mind.⁴⁰ For this reason, although mind may require embodiment in a living organism, all life need not possess mental activity.

What then is the missing factor that must be added to the elementary generic life processes of organic unity, metabolism, and reproduction, to reach the threshold of psychological reality?

Plato points toward a solution in unmasking the limitations of organic unity in his analysis of the City of Pigs in Book 2 of the *Republic*.⁴¹ He here describes a community associating its members through complementary trades pursued by individuals in response to naturally given needs on the basis of their naturally differentiated talents. Embodying organic unity, this economy sustains itself through the complementary occupations of a division of labor by which the needs of all get satisfied. Yet the unity of the whole is not the aim of any of the particular trades comprising its organs. Such a "City of Pigs," limited to organic interdependence, contains no agency imposing the unity of the whole upon its constitutive elements. Lacking such a ruling function, the economic association of the "City of Pigs" is not a body politic. There may be law in the sense of a form embodied by the whole, but, to paraphrase classical political economy, this is an economic law of market interdependence operating as an invisible hand, lurking behind the backs of all without being enacted by anyone. Just as politics adds a ruling agency that imposes order upon the whole to which it belongs, transforming the economic order of a civil society into a state, so mind may be thought to add to life a presiding subjective factor that relates itself to the entirety of the organism, be it through feeling, consciousness, or intelligence. Like rule, which is exercised by an agency within the body politic that nevertheless acts upon the whole, mind can be seen to relate to the organism to which it brings feeling, awareness, and intentional control in a way very different from how merely physical organs complement one another. Plato specifically distinguishes the unity of the state from that of an economy by revealing how the body politic depends upon a ruling element that realizes the unity of the whole in virtue of knowing what that unity is and purposefully sustaining it. By analogy, the mind relates to the body by being that element of the embodied self that determines its totality in function of being aware of whom it is, be it as a feeling self, a conscious subject, or an intelligence.

As Foster points out, Plato still makes use of categories of craft to comprehend rule, even though these are just as incompatible with the reflexivity of rule as with the self-activity of life. The technique of craft lacks reflexivity and self-activity by realizing a design antecedent to and unaffected by the process of its realization, imposing form upon a material that is other than the artificer.⁴² Understood as an exercise of craft, rule must impose order upon something other than itself, a passive material awaiting the informing activity that neither belongs to it nor acts upon itself. Since Plato applies this understanding to city

and individual alike, he is compelled to divide the polis and the soul into ruling and ruled components, even though the ruling parts of the polis and the soul still rule over themselves insofar as they belong to what they order.⁴³ Plato cannot overcome this incongruence between his terms and their object, for like his student Aristotle, he lacks the conceptual resources to conceive self-rule. This is most patently evident at that juncture in the *Republic* when Socrates argues that the soul must be divided into separate ruling and ruled parts because self-control is inconceivable, given that it requires that patient and agent be one and the same.⁴⁴ Aristotle follows the same course in *De Anima* when he divides intelligence into active and passive parts⁴⁵ and in the *Politics* where he conceives ruling as something citizens do in turn, alternating as ruler and ruled, but never governing themselves jointly as a self-ruling citizenry.⁴⁶

Nonetheless, Plato has introduced the idea that the unity of the soul, in analogy with the unity of the polis, is distinct from that of both artifacts and organisms in having to be apprehended by something within it in order to be realized.⁴⁷ Just as Kant distinguishes moral action from natural motion by its being not just in accord with law, but determined by the conception of law,⁴⁸ so mind in general would be constitutively determined by being aware of its own unity, however that awareness and unity be comprised. Unlike organic unity, mind would not have its essence exhausted in the form of its parts and their dynamic organization. Instead of being just the substance of a form with a species-specific nature,⁴⁹ mind would be the subject of a self-activity necessary for its realization. Because its own self-related activity is inherent in its being, mind would possess an essential particularity rendering it individual in nature.⁵⁰ This contrasts with the technical informing where the subject is a passive material upon which the informing activity is exercised. The individuality of that passive subject is accidental with respect to the realization of the independently given and externally imposed form, which is the same in all recipients of that design. When the realization of form occurs instead through awareness of form, the subject is active, informing itself by a (mental) activity in which the apprehended form is the passive object. The subjective dimension of mind is now essential to its realization, comprising "an active power to realize form in itself."⁵¹ When the subject becomes aware of form, that form is realized not only *in* but *by* the subject, who ceases to be just a subject of predication, a substance in which predicates inhere, and becomes instead subject of a self-informing activity, who can thereby oppose objectivity in a subject-object relation.⁵² Certainly life is also self-realizing, sustaining its own process as an end in itself. Yet the living thing does not inherently do so through a distinct subjectivity at one with itself in relating to the whole.

To further comprehend what distinguishes psychological from organic unity, it is helpful to invoke a logical difference that Hegel makes thematic for comprehending the nondualist relation of mind and body. Mind and body are

not related as one particular to another, be it as independent substances or as different organs of an organism. Rather, mind and body are related as the universal that relates to the particular by overarching and containing it.⁵³ The universal cannot be at one with itself without having the differentiation that particularity affords. Without particularity, as well as the individuality that distinguishes particulars from one another, the universal cannot be a one over many. Particularity, however, is not just something different from universality. It is rather an otherness that is no less united with the universal that pervades it. Otherwise, the particular does not instantiate the universal, but comprises something that the universal is not. Then, “third man” problems are inevitable, for something else must be introduced to connect universal and particular, which, as extraneous to both, calls for further mediation without end.

Moreover, particularity is not an appearance of the universal, nor is the universal the essence or ground of the particular. Plato makes the mistake of subsuming the particular and universal under such categories of the logic of essence⁵⁴ by treating particulars as phenomenal, deficient replicas of the universal idea or form. That form figures as their true essence, imposed upon sensible matter by the technique of a divine demiurge. Yet determinations posited by some prior determiner always lack the independent being belonging to the factor that gives them their derivative semblance existence. Particulars, however, are not mere posits. As differentiations immanent in the universal, they must share the same intrinsic being that allows them to be the universal’s own determinacy. The universal determines itself in the particular, rather than positing something else with a derivative, conditioned existence. That is what allows the universal to have individuality, with an intrinsic differentiation that is determined in and through itself. It is also what allows particulars to be individuals, exhibiting the same independent being endemic to self-determination.

Mind exhibits the true relation of the universal and particular by being at one with itself in the body, provided the body comprises the necessary vehicle of mind’s own actuality. While being irreducible to another bodily organ, mind will still exist nowhere else but in the body. Similarly, the universal, by differentiating itself in particularity, relates to particularity as a specific differentiation falling under its own encompassing unity, which now has the universal and the particular as its differentia. Mind, relating to itself in the body, will equally relate to the body in a relationship contained within the whole that mind comprises.

That relation will not make bodily alterations effects caused in whole or part by the mind. Categories of essence, such as essence and appearance, whole and part, ground and grounded, and cause and effect, which all determine determinacy by a prior determiner, cannot apply to the relation of mind and body. If they did, mind would have an antecedent immaterial existence of its own, of which the body is a mere semblance. Yet mind cannot have an individual unity,

temporality, or any specifically mental content without embodiment. Hence, the physical realization of mind cannot be posited by mind, for mind cannot posit anything without already being embodied. For this reason, the mind's relation to the body never consists of mind being a cause of bodily events. That would reinstate a mind/body duality, where mind acts upon not its embodied self, but a body different from itself. Mind must instead be self-cause, *developing* as something encompassing the body and the organic processes of the mind endowed individual.⁵⁵ Only as self-cause of an embodied unity, that is, as self-determined, can the mind be the cause of something else, namely effects generated by the influence of its corporeal actions upon other things, whether inorganic objects, plants, or animals with varying degrees of mental endowment.

3.4 Limits of Searle's Parallel Proposal

An apparently analogous relationship is advanced by John Searle in construing mind as realized in the brain, which comprises mind's enabling condition. Acknowledging that consciousness is a biological phenomenon, whose conscious states are caused by brain processes, Searle purports to overcome the bogus presupposition to which dualism and reductive materialism are addicted: that mind's subjectivity cannot have physical reality.⁵⁶ Searle maintains that mind goes together with life, but offers little explanation of how and why mental activity requires biological realization, nor how mind adds anything psychologically specific to organic process.

Searle wishes to retain the subjectivity of mind, while placing it in the world. Yet by declaring that consciousness's irreducible first-person being is no metaphysical puzzle, but only a fact about nature, Searle leaves this facticity in need of explanation.⁵⁷ All he offers is the dubious analogy that just as digestion is a higher-level feature of the stomach, so subjective states of mind are no more than "higher-level features" of the brain.

Yet can any distinction between psychological and organic unity be retained if the relation of mind to brain or to any other part of the body be modeled after how digestion relates to the stomach, or how any organ function relates to its physiological embodiment? Because the organs of a living thing are means and ends to one another, no organ can be detached from its function, nor maintain itself and its functioning apart from the whole organism. This applies to the brain as much as to the leaves of a tree.⁵⁸ The nervous system, of which the brain is part, sustains itself and is sustained in turn by facilitating sensibility and irritability, enabling nutrition and reproduction, allowing the other organs to function and jointly uphold the whole animal and its entire species. Certainly, the nervous system may be damaged by disease or injury, reducing the animal

to a comatose vegetable. Yet, just as this leaves the animal an animal in name only, so the brain can hardly be fully operational if ripped out of the organism and placed in a vat, somehow kept firing by connection to some electro-chemical mechanism. Because that supporting electro-chemical enclosure is not alive, it must be manufactured, activated, repaired, and regulated by a separate agency, which, to perform these very activities, must be more than another brain in a vat.⁵⁹ Moreover, whatever neural transmissions leave the brain in a vat as if regulating body processes and movements would not produce the actual body state alterations that normally generate neural transmissions back to the brain contributing to the self-related “sense of being alive.” To simulate this sense, the brain in a vat would have to be connected to a surrogate body, effectively removing it from its vat and reinstating it as an organ of a living animal.⁶⁰

In any event, whatever be the neuro-physiological system in which mind is at least partly realized and enabled, mind cannot relate to it as digestion relates to the alimentary system. However mind be embodied in an organism, its relation to it is not the same as how the function of a particular organ relates to that organ. If this were the case, “mind” would be just one complementary function among others, reducing the mind/body relation to the organic unity of a “City of Pigs” from which all subjective centrality is excluded.

Searle casts that subjectivity into final peril by using efficient causality to capture how the brain enables mental activity and how the mind animates the body. Dualism reenters, for if the brain is the efficient cause of the mind, and, alternately, the mind is the efficient cause of bodily alterations, there can be no intrinsic connection between brain and mind or mind and body. Although a cause may condition the existence of an effect, this relationship leaves cause and effect indifferent to one another with respect to kind or import.⁶¹ This, after all, is why Searle must regard the subjectivity of mind’s biological being as a contingent fact of nature. Lacking intrinsic connection, brain and mind might just as well part ways. Whether an effect of the brain or a cause of effects in the body, mind is something separate, rather than something always embodied that acts upon its own embodiment.⁶² It should hardly be surprising that Searle allows for the manufacture of an artificial brain capable of causing and sustaining consciousness, just as an artificial heart machine might pump blood through the body.⁶³ Since brain function is understood in terms of efficient causality, it remains extrinsic to the material in which it operates, like the design of an artifact. This fails to capture not only the centralized subjectivity of mind, but the self-realizing form of organic unity, which cannot be separated from the living material it encompasses.

Nonetheless, if mind comprises something over and beyond organic unity,⁶⁴ being neither a particular organ among others nor something causally interactive with the body, this does not mean that mental activity has no specific biological

prerequisites. Given the impossibility of a purely immaterial mind and the limitations of mechanism and technique, there can be no turning back to categories of craft and artifacts. Nor can life simply be left behind. Instead, the search for the distinctive character of mind must consider what life has to offer, not just in general, but in a specific type of life on which depends what the object of psychology adds to that of biology.⁶⁵

After all, some if not all animals appear to have mental activity, whereas plants do not. This raises two fundamental questions. First, what distinctive biological endowment do animals have over and above the basic life functions they share with all other organisms? Second, how might animal physiology make mind possible? Answering these questions equally involves ascertaining the specific biological deficiencies of plants that leave them devoid of mental activity. Addressing these related issues paves the way for identifying what is distinctive about mind, as well as explaining why mind cannot exist without being a certain type of living thing.

3.5 Why Plants Lack Mind

All life possesses organic unity, metabolism, and some connection to reproduction,⁶⁶ whatever be the additional biological endowments differentiating possible life forms. For just this reason, these three basic life processes can distinguish a rudimentary form of life that lacks the biological additions characterizing other types of living things.

Although modern biology may distinguish organisms whose cells have nuclei (eukaryotes) from those that do not (prokaryotes), it is not evident that this distinction introduces any life function beyond organic unity, metabolism, and reproduction. Plant life, however, can be distinguished as possessing these three basic life functions without having any of the others pervading the animal kingdom. Plants do exhibit sensitivity to light, water, and specific chemicals released by other organisms, a sensitivity guiding tropisms molding growth, chemical emissions, and membrane permeability in the service of survival.⁶⁷ Nonetheless, plants lack sensation and irritability, which either already involve mind or at least get associated with mental activity.

Animals, of course, share the three basic life functions. Animal metabolism involves elemental sensitivities and automatic chemical responses, as in endocrine and hormonal systems, analogous to plant sensitivity and tropism. In these respects, animal life has a vegetative side, to which an animal may be reduced by disease, accident, or hereditary impairment. This could suggest that nothing in plants is foreign to animal life, because animals incorporate everything that distinguishes plant life.

Yet, when the basic life functions define plants to the *exclusion* of sensation and irritability, this independent realization involves features animal organisms cannot share to the degree that they bar the biological endowments that set animal life apart. If the physiologies of sensation and irritability are prerequisites for mind, then those features of plant life that exclude these animal functions equally prevent plants from possessing mental activity.

Insofar as plants are distinguished from animals by being restricted to the three basic life functions, plant life is characterized by the immediate identity between the particular operations of its organs and the unity of the organism.⁶⁸ This immediacy is manifest in the distinctive features of plants, which all preclude any distinguished internal centrality by which an organism could be sentient and respond in function of its feelings.

First, the differentiation of the plant tends to have a fractal organization where each part is equally the whole plant in miniature, both as actually configured and as potentially becoming detached and forming an entire new plant with the same divisibility. Roots, buds, branches, and leaves may all have complementary functions, but they equally can separately generate a whole organism like that to which they belong. This occurs not through a self-impelled act of reproduction, but as a process of growth following upon some externally determined separation. Indeed, as Kant observes, not only can a bud from one tree be grafted onto another and produce a plant of its own species in an alien stock, but “even in one and the same tree we may regard each branch or leaf as . . . grafted onto it, as an independent tree that only attaches itself to another one and nourishes itself parasitically.”⁶⁹

The absence of a determining centrality is exhibited by the growth process of plant life, whether growth proceeds from a detached plant part or the plant as an integral whole. Animals typically grow by retaining their shape as they increase in size, either throughout a relatively uniform maturation or during each successive stage of metamorphosis. Plants, by contrast, typically augment themselves with additional fractal forms, adding new roots, branches, leaves, and so forth. Instead of maintaining the same structural unity, the plant grows out of itself into a plethora of potentially separable individuals. Unlike the internal viscera of animals, which do not multiply themselves in the growth process, the parts of a plant are, as Hegel puts it, only particular in relation to one another, lacking a relation to the whole that would limit how many such organs belong to the organism.⁷⁰ Although the parts of plants retain organic differentiation, involving complementary functions (e.g., qua roots, stems, leaves), their proliferation equally entails an indefinite multiplicity of members which are more quantitatively homogeneous than qualitatively distinct.⁷¹

Accordingly, the three life processes—of the organism within itself, in relation to external nature, and in its species being—tend to coincide in the plant

organism.⁷² The internal organic unity of the plant equally involves its nutritive process in relation to its environment and its proliferation into multiple instances of itself. That is, the complementary functioning of the plant's parts consists in its continuous absorption of nutrients, water, and light, whose assimilation involves growth branching out into a virtual plurality of plants.

Plant nutrition here distinguishes itself by two related aspects: an uninterrupted intake of material for its metabolism and an assimilation relating to universal elements, such as water, light, carbon dioxide, and nitrogen, rather than to individual food and drink.⁷³ These aspects go together, for insofar as plants continuously absorb nutrition from their environment, they do not engage in any intermediate discriminating activity addressing particular individual nutrients, as sentience and irritability make possible.⁷⁴ Thanks to photosynthesis, plants can directly transform "inorganic matter into organic compounds," drawing "sustenance from the ever-ready mineral supply of the soil," absorbing water, carbon dioxide, nitrogen, and dissolved nutrients osmotically. Plants thereby escape any need to move themselves toward the nonadjacent water sources, salts, and specific plants or other animal prey on which animal metabolism must depend.⁷⁵

Furthermore, because the chemical interchanges of plant metabolism occur in immediate contiguity with the environment, plants' continuous organic need is uninterruptedly satisfied. This precludes desire, which requires some gap between biological want and its fulfillment. Without some such separation in space and time between need and satisfaction, no lack can be felt nor can any action be undertaken out of an appetitive urge.⁷⁶ Unlike plants, animals do stand separated both spatially and temporally from the external fulfillment of their metabolism. Lacking the abilities to draw sustenance immediately from their surroundings, animals must take some intermediate action motivated by need to reach objects of nutrition, which they must sense at a distance to locate, then take time and effort to approach and finally expend further time and effort in breaking down their food into a form that the animal organism can metabolize. By contrast, plants have no need of spatially relocating themselves or putting off satisfaction to a future moment, contingent upon the success or failure of a self-controlled movement driven by the urge of felt want.

Plants may gradually alter their orientation to capture light or grow their roots in the direction of moisture. Yet throughout these tropism processes, plants continually immediately absorb light and nutrients, guided by the local sensitivity of the parts involved. These tropisms do not comprise mediating efforts in pursuit of some particular need fulfillment lying at some spatial and temporal remove. Instead, they follow light and water in general, without any intervening subjectivity that might detach itself from external immersions, stand in independent relation to its drives, and direct the organism to seek one nutrient factor rather than another.⁷⁷

Admittedly tropisms are not just effects of external causes. They instead exhibit the internal teleology of the plant organism, which develops itself so as to survive and reproduce, guided by a general sensitivity to its environment. This sensitivity and tropic response may involve both mechanical contact and chemical reactions, but they further involve reorientations and growth that sustain the particular nature of the plant, rather than being effects indifferent to the kind and import of what gets causally impacted. Nevertheless, plant sensitivity does not involve the organism relating to itself in relating to some stimulus. Plant sensitivity is purely localized in reception and reaction. That part of the plant that is sensitive to some general factor, be it light, air, or moisture, immediately undergoes a species specific growth reaction or membrane alteration facilitating the continuous absorption of metabolically necessary factors. The plant cannot unitarily register and thereby sense these factors, nor can it relate to itself as a unitary subject in its reaction and manifest irritability. *Parts* of the plant alter their orientation and direction of growth, but the plant does not change its position as a whole and move itself from place to place. Neither in sensitivity or in tropism does the plant register and react as *a self*. Instead, it exhibits the same immediate dispersion into particular parts reflected in plant “anatomy” and growth.⁷⁸

Dennett misses the crucial point by suggesting that plant sensitivity and tropism differ from animal sensation and irritability in respect to the speed of registration and reaction. On this view, plants may just be “very slow animals,” restricted to the sluggish flow of “biochemical packets of control information,” which animals share in their hormonal systems, but otherwise leave behind thanks to the incomparably swifter and more finely distributed system of electrical pulses coursing through nerve fibers.⁷⁹ Speed alone, however, cannot provide the subjective unification allowing sensitivity to be centralized into the feeling of a feeling self and enabling tropic reaction to be supplanted by the unitary animation of irritability.

The plant does, of course, have a unity, but that unity is just immediate, sensuous, organic unity, differentiating itself in spatial self-dispersion, always multiplying itself in further unfolding, growing and gravitating toward light and moisture outside it. This does involve more than the motion of weighted matter to a center of gravity beyond itself, for the plant extends and reorients itself for the sake of its survival. Nonetheless, the plant’s perpetual absorption of natural elements reflects its inability to break off from its external immersion and relate to itself and its environment as a subject, determined internally, rather than externally.⁸⁰

Plant reproduction exhibits the same lack of aloofness from inorganic nature and external conditions more generally. Proliferating through continuous metabolism with the elements, plants can hardly propagate through any *act* of their

own. Even when they reproduce sexually, plants must depend upon inanimate contingencies or animal intervention to achieve fertilization and the sprouting of seed. Before the emergence or after the possible extinction of animal life, plants could not propagate unless waters flow and winds blow to distribute seeds and pollen, whereas whenever animals exist, many plants cannot reproduce unless insects pollinate them and birds and other animals eat their fruits and crack their nuts, distributing seeds and enabling their germination.

In all these respects, plant life presents physiological barriers to the emergence of any active central focal point, any subjectivity, distinct from the particular parts of the organism, yet able to mediate how their combined operation serves the entire life of the living thing. The unity of the plant remains directly immersed in the particular functioning of its parts, whose externality persists in correlative ways resistant to subjective unity. On the one hand, the parts are subject separately to continual external influence, to which they immediately respond in localized reaction. On the other hand, these parts show their incommensurability with any common rule by being separable into individual plants of their own. Precluded on both accounts are the biological prerequisites for any encompassing agency that could enable the organism to register or react to its biosphere as a unitary self. Alive, but bereft of subjectivity, plants cannot have minds.

3.6 The Animal Organism and Subjectivity

Unlike plants, animals are not restricted to the basic functions of life. Instead, animals inform these with the supplement of two coordinate activities: sensibility and irritability.⁸¹ How these are distinguished from sensitivity and tropism is reflected in the distinctive ways in which animals are internally organized, interact with their environment, and reproduce. In all these primary life functions, animals exhibit a subjective unification that is absent in plants.⁸² Whereas the lack of such subjectivity allows the basic functions of life to tend to merge with one another in plants, these functions have very distinct realizations in animals.⁸³

Animal organic unity is characterized by a complementary functionality in which the organs reproduce themselves and the whole animal not just through their specific differences, but with regard to their number. The parts of plants have a numerically indeterminate relation to one another, allowing for the multiplication of roots, branches, and leaves in a growth process that is always spilling out beyond itself in fractal proliferation. By contrast, animal anatomy consists in a diversity of viscera and external appendages that retain their basic quality and quantity either within each stage of metamorphosis or in morphologically

continuous growth. We do not add fingers, eyes, or kidneys as we grow, but retain the same number as we mature, allowing for loss through injury or disease. Owing to this general numerical constancy, animal growth does not merge with reproduction, as with plants that grow by multiplying themselves.

Furthermore, although some of the most primitive animals, such as flatworms, can be cut into pieces that regenerate into complete living individuals, generally animal organs do not have the relatively loose connection that allows parts of a plant to be separated and grow into new individual plants.

This heightened oneness in animal organic unity is exhibited in the two organ systems underpinning sensibility and irritability: the central nervous system and a centrally controllable musculature. Not insignificantly, the central nervous system is most limited in its powers of regeneration and repair.⁸⁴ Two parallel functions characterize the central nervous system, however it may be physiologically realized. On the one hand, the central nervous system registers states of the body generated internally and externally. This involves registering not only sensations emanating from sense organs, but feelings related to appetites. On the other hand, the central nervous system thereupon activates parts of the body to move themselves by instigating muscle contraction and relaxation. By means of the former registration, the nervous system provides the physiological realization of sentience, whereas by means of the latter muscle activation, the nervous system teams up with the musculature to constitute the physiology of irritability, whereby the animal moves itself in response to its sensations and related drives. Unlike mechanical action and reaction, which is always indifferent to the kind and import of what it effects, irritability involves a stimulation to self-movement that depends upon the stimulated animal possessing both sensibility and the capability of goal directed behavior. What distinguishes the goal-directed behavior of irritability from the localized response of plant tropism is that it fulfills a drive felt by the animal in function of its specific physiological wants and its sensations of its environment. This drive comprises a purpose that may or may not be consciously pursued. It can operate unconsciously as instinct and the "lower" the animal species, the more its members may live purely instinctually.⁸⁵ Yet whether unconsciously or consciously pursued, drive fulfillment is always predicated upon sensibility and the capacity of the animal to respond as a self to what it feels and wants as a self.

As Dennett rightly points out, sensitivity, to which plants are limited and which animals incorporate in their hormonal and endocrine systems, is distinguished by its medium from the sentience of animals.⁸⁶ Whereas sensitivity operates by chemical reactions resulting from transmissions of chemicals through the organism, sentience or sensibility employs transmissions of electro-chemical pulses through nerve fibers. Admittedly, the electro-chemical medium of the nervous system can register bodily alterations much more swiftly and through

finer reaches of the organism than the passages of "packets of chemical information." Yet, as we have seen, greater speed and pervasiveness of media do not of themselves transform sensitivity into sentience. What is required is that the nervous system provides a unified registration of all sensations, in respect to which nerves can move the body as a whole, changing its position and severing its continuous subjection to external influences. In order to provide sensation, that registration must not only be unitary, but relate the one subject of all the registering to the totality of registrations. On that basis, the same nervous system can activate the muscles so as to move the body in its entirety, as a unified responder, while equally monitoring its own bodily movement through proprioception, enabling continuous guided behavior.⁸⁷ Then, the animal can act as a centrally self-controlling subject of drives, elicited and satisfied in function of what it senses.

Without these dual self-related unifications, sentience reverts to sensitivity and irritability reverts to tropism. What parts of the body register chemically transmitted information then do so immediately, resulting in local reactions proximate to these chemical receptors. Reacting to chemical information without the mediation of a centralizing reception, such as provided in the *sensing* of smell, the organism does not act as a whole, but only reorients a part of itself.⁸⁸

Certainly the greater speed of nerve transmissions, as well as the flexibility and miniature scale of its pathways, facilitate the combining of simultaneous registrations into a unified field, conveying corporeally dispersed changes in relatively real time. Yet unless there is a physiological system to centralize these registrations, as well as unify muscle activations, there can be no subject to feel or react as a unitary self. The nerves must have an inner and an outer reference to effect both sensation and motion.⁸⁹ Yet the nerves of the nervous system must further coalesce into a reflexive excitation, somehow registering its own registrations in their entirety.⁹⁰ Only then can there be a biological realization of a sentient self, relating to *its* centralized monitoring of *its* body in general, through which it might then sense the world it inhabits⁹¹ in function of the life processes to which sentience contributes.⁹² Furthermore, only once the nervous system can move the body through muscle excitation in an equally unified manner, can the self-sustaining conatus of the animal organism take the form of appetites that the animal possesses and satisfies as a subject of purposive self-movement.⁹³

In virtue of these physiological centralizations, animal metabolism is no longer restricted to continuous assimilation of nutrients, absorbed in their elemental form as light, air, and water in general. Animals certainly retain some continuous absorption of needed elements, such as in the use of sunlight to produce vitamin D and control bodily rhythms or in the absorption of air and water through cell membranes.⁹⁴ Moreover, during periods of sleep, animals sink into a relation with nature in general, instead of actively determining with what they interact.⁹⁵ In their animated, waking state, however, animals characteristically drink and

feed upon individual nutrients at particular times and places precisely because these nutrients are neither immediately available nor can animals immediately metabolize them. Whereas plants can continuously absorb and photosynthesize nutrients without need of traversing any spatial and temporal gap between need and satisfaction, animal metabolism depends upon the mediating interventions of sensibility, desire, and motility.⁹⁶ As Jonas emphasizes, this metabolic gap is constitutive of animal life.⁹⁷ Because animals lack plants' ability to immediately metabolize material directly contiguous with them, animals cannot rely upon local sensitivity and local tropic response. Animal need constitutively addresses objects of satisfaction that lie at a distance and thereby must be sensed across space. The achievement of animal satisfaction is spatially and temporally separated from the need it addresses, since what must be approached can only be obtained in the future after moving toward it. This spatial and temporal interval makes desire possible, for, as Jonas observes, only when need is not continuously satisfied here and now can there be an opportunity for want to be felt as an urge to engage in activity to bring about satisfaction at a further place and time.⁹⁸ Desire can only be had for an object of want that is yet to be consumed, just as action can only proceed from an urge if it must unfold before reaching its satisfaction. For just this reason, a desiring organism always confronts the possibility of failure to achieve satisfaction, which the animal will equally feel to the extent that it is sensitive to its own need fulfillments. Moreover, because some animals are prey to others, they cannot move themselves to escape unless they sense their peril and feel the urge to evade their predator. These feelings of fear are just as basic to their survival as the urges to feed that motivate them and their stalkers.⁹⁹

Whether animal metabolism relies on certain water sources, salt licks, or individual plants and animal prey, animals must maintain themselves through the wakeful effort of particular motivated actions, rather than through the dormant organic functioning of a vegetative existence.¹⁰⁰ In this ever precarious pursuit, animals are only able to locate and focus upon their objects of food and drink thanks to sensation that can operate across space as well as upon irritability's urge and capacity for the bodily movement needed to attain them across space and time.¹⁰¹ Moreover, once animals have moved to their source of food, they cannot metabolize it without engaging in two stages of further intermediary process. Animals must first mechanically break apart their food to make it suitable for ingestion, and only then, chemically break it down in the process of digestion. Whereas plants can immediately absorb nutrition through osmosis and produce it through photosynthesis, animals must bridge the gap between need and satisfaction and traverse space and time to achieve their metabolism, even at this last stage. Sentient self-movement remains necessary from beginning to end, internally precipitated by an urge to achieve a satisfaction whose fulfillment depends upon noncontiguous objects of need that must be sensed at

a distance, desired, and thereupon actively approached. Even to mechanically convey, shred, and ingest its food, the animal must rely on sensibility to guide its movement and upon urge to set itself in the appropriate motion. Only then can the automatic chemical transformations of digestion proceed in their automatic, quasi-vegetative way.

That successful conclusion, however, only renews with a vengeance the intermediate strivings of animal survival. Due to their distinctive metabolism, animals, unlike plants, cannot nourish themselves immediately off inorganic material, but must feed on other living things. In so doing, animals consume their proximate source of nutrition, continually compelling themselves to seek their food elsewhere, requiring further mediating effort.¹⁰²

For animal metabolism to carry out its characteristic functioning, the animal body must maintain two coordinate features that distinguish it from a plant. On the one hand, the animal must preserve the unity of its shape so that it can move itself as a whole, instead of losing its centrality and letting its parts independently reorient themselves.¹⁰³ On the other hand, self-movement will not be possible unless the animal possesses some ongoing metabolic process preventing its body from being frozen into a rigid posture, dissolving any such unyielding cohesion, and providing a continuous source of kinetic energy. Only then can the animal determine its own place, instead of having its location determined from without.¹⁰⁴ Moreover, this metabolic process must produce sufficient "surplus" energy to enable the animal to engage in its intermediate activities before and after they finally succeed in securing and readying nutrients for assimilation.¹⁰⁵

This metabolic surplus requirement applies equally to animal reproduction, which is similarly transfigured through the subjective agencies of sensibility and irritability. No longer does reproduction follow plant life by either coinciding with growth or depending chiefly upon external conditions to achieve fertilization and maturation of offspring. Instead, animals reproduce in virtue of sensing their environment and other members of their species, feeling reproductive and nurturing drives, and then taking the actions needed to propagate and, when necessary, help their offspring reach independent maturity.

None of these distinctive animal activities involve violations of mechanics or chemistry. Animals remain governed by the laws of motion applying to objects *qua* matter, irrespective of their kind and import, just as animals remain subject to the same chemical reactions that apply to substances whenever they come into contact with reagents and catalysts. Nonetheless, as much as gravity exerts the same force upon a cat as any other body of the same mass, how a cat falls is no less determined by how its nervous and muscle systems enable it to sense its situation and respond in terms of its specific animal species being.

Animal movement may well be precipitated by some impulse communicated from without. Yet, how animals respond is very different from the way an

artifact or an inanimate natural object reacts to an external stimulus. Artifacts, as well as inanimate things, can only move with the same amount of motion communicated to them by the impact they receive. What specific nature they have contributes nothing to the direction or speed of their movement. Besides mass and motion, only their shape can affect their trajectory due to mechanical resistance, for shape pertains just to their spatial configuration as matter, with indifference to their kind. By contrast, animal motion is determined neither in nature or in quantity simply by the external stimulus that occasions it. A blow delivered to an albatross will result in very different movements than what follows from the same blow delivered to a tiger or an alligator. This is because animal movement, even if set off by an external impulse, is determined from within the animal itself, reflecting the particular survival mode of its species being,¹⁰⁶ as well as its sensations of its current situation and the drives these elicit.¹⁰⁷

Plants, too, shape and form their matter in ways that go beyond mere mechanics and chemistry, metabolizing, growing, propagating, and altering their orientation in function of individual and species survival. What makes animal movements different from plant growth and tropism is how animation informs the basic life functions with the subjectivity distinguishing sentience and irritability.

Unlike a plant, an animal breaks off its immediate relation to its surroundings, nullifying its given location by moving to another one as a centralized individual, sustaining itself and its species by how *it* senses what it needs in its biosphere and by how *it* actively fulfills the drives *it* thereby has concerning satisfactions to be achieved at a spatial and temporal remove. The animal must do this because it cannot sustain itself, as does the plant, through its immediate connection with its environment. By having actively to initiate its relation to its biosphere in order to fulfill its life functions, the animal organism remains related to itself, surviving in virtue of its own self-directed activities, instead of leaving its life process immersed in relation to what is external to it.¹⁰⁸

For this reason, irritability is not a mechanical relationship of unconditioned or conditioned reflexes, where external stimuli cause responses to occur as passive results of nerve excitations, as if regularities of behavior were just contingent coincidences, like Pavlov's artificial conjunction of the arrival of food following the sounding of a bell.¹⁰⁹ Instead, irritability involves response to stimuli in function of the active self-sustaining nature of the animal and its internal sensations and appetites. To figure as a stimulus of behavior, something must be relevant to the life functions of the animal and how it actively relates to its environment.¹¹⁰ In this respect, to paraphrase Popper, a cat patiently waiting outside a mouse hole is carrying out "an action program" rather than mechanically responding to a stimulus.¹¹¹ There are sensed occasions, but these are themselves determined by

how the animal moves itself in a manner rooted in its biological species being and its particular exploratory drives.

Although animals could be said to have receptors and effectors, embodied in sense organs and the organs of motility, these are not immediately connected in some mechanical reflex. Contrary to the behaviorist and cybernetic reductions of animal nature to sentience and movement,¹¹² sensation and motility are connected through drives. Owing to this third constitutive factor, animal movement involves effort, rather than mechanical performance, for an animal will take action only when driven by the self- and species concerns inherent in life.¹¹³ The irritability basic to animals is therefore not just motility predicated upon sensibility, but motivated motility, urged on by goal-directed feeling.

3.7 The Place of the Self in the Animal Body

The self that senses and acts may be facilitated by the nervous system and its muscle-system counterpart, but it would be a mistake to locate that self in one or both of those physiological organs. The sentient self and the irritable self are one and the same, for each involves a dimension of the animal subject by which it acts as a unitary agent, in one regard as a subject of sensations and feelings, and in the other as a subject of appetitive self-movement. Neither sentience nor irritability can be independently apart from one another, for the animal cannot be sentient without having urges that require activity for their satisfaction, just as the animal cannot have irritability without sensing its environment and feeling its wants.¹¹⁴

The animal is thus at once sentient, appetitive, and responsively self-moving, and in each capacity it is the self-same subject, animating its body in its entirety. For this reason, the subjectivity inhabiting the animal organism is omnipresent in it. All-pervading because of its subjective unity, the animal's animus is not present as such in any of the particular physiological locations through which it courses.¹¹⁵ Neither the whole nervous system nor the brain is the seat of the animal "soul" because the self is not a physiological part of the organism. Even if brain transplants were ever to be possible,¹¹⁶ the individual subject emerging from that transplant would sense and feel in every part of the registering body, as well as fulfill its appetites in moving every part of the body that responds. The transplanted brain might carry over neurologically rooted memories, habits, and appetites from the previous animal to which it belonged, but as soon as it takes its place as one organ among others, it contributes to a subjectivity infusing the entire animal. Integrated within the animal self, the brain is an instrument of the mind, which relates to itself in and through the entire organism.¹¹⁷ The nervous system and, in sufficiently advanced animals, the brain in particular

may decisively contribute to the subjectivity distinguishing animals from plants. Nervous-system damage may affect sentience and irritability in uniquely direct ways. Different parts of the brain may be correlated with specific cognitive functions. And generally, nerves may be the condition for sensation or any responsive goal directed behavior.¹¹⁸ Yet the nervous system remains an organ mutually dependent upon others within a living whole, animated by a subjectivity, a self as present in it as in every other recess of the animal. That subjectivity is the animation physiologically actualized in the sentient and irritable life functions of the animal organism. Nonetheless, that sentient, irritable self cannot be separately located in any *particular* physiological structure, the brain included.

This lack of any spatial particularization other than omnipresence within the individual animal renders the subjectivity of animation something physiologically actualized, yet purely inward or ideal in nature. This inwardness or ideality is indissolubly bounded by the body of the individual animal, without being located anywhere in particular within it. The contingent placement of sense organs may locate certain points of visual, auditory, olfactory, taste, and even touch perspective, yet the sentient self unites them all in a subjectivity equally at home in all these different locations. One may imagine “out of body” experiences, but experience, however hallucinatory, is always confined within the mind’s animal embodiment, even if exclusively uncontainable in any particular part. Certain portions of the body may be amputated or extracted without destroying the mind, but the abiding mind can only retain its constitutive subjectivity by belonging to and animating the whole remaining animal organism.

Accordingly, the animal self that feels, senses, desires, and moves itself is not reducible to the neurological activity that plays an essential role within the organic unity special to animal life. It is not the nerve impulses nor the neural network nor the brain in its entirety that feels, desires, or moves itself. Neural discharges always remain the same binary, all-or-nothing firings of particular cells, incommensurate with the different mental states to which they can be associated.¹¹⁹ Moreover, patterns of neural connections in or outside the brain never comprise by themselves the recognition that they reduplicate or represent any internal subjective states or external objective relations.¹²⁰ All talk of “neural representation” and of topographical congruity between neural patterns and what they supposedly are about ignores that no such “representations” or patterns can perform the relation to self and relation to other that would allow them to refer themselves to any objects.¹²¹ Only the animal organism as a whole can relate to itself as a subject, even if that possibility requires the organs of nervous, sensory, and muscle systems that distinguish animals from plants. Moreover, although feeling forms itself corporally, the entire body remains distinct from the self-related activity by which corporeal processes are felt.¹²² In sensibility

every particular aspect of the body that is registered is thereby taken up into the simple encompassing awareness of the feeling subject.¹²³ Whatever touches that subject, be it external things or the body's own impact upon itself, that subject immediately transforms into a sensation of its sentient self.¹²⁴ Sentience involves a relation to other, but one in which that other—independent, external, and possessing sensible features—becomes transformed into a content of the animal self's feeling.¹²⁵ Its subjectivity thus communes with itself as the universal active element into which all sensations fall and from which all drives project themselves.¹²⁶ In irritability, this same sentient self relates to its external biosphere through its own subjective feelings, upholding itself as a self-controlling animate subject by determining where, when, and how it will fulfill its drives.¹²⁷

The connection between animal life and mind revolves around this subjectivity that is present in animals but absent in inorganic natural things, artifacts, and plants.¹²⁸ Because mind must be embodied, because mind irreducibly involves the self-active self-relatedness of subjectivity, and because animals have a subjectivity lacking in other living and inanimate things, there can be no mind without animal life.¹²⁹

3.8 Ramifications of Mind's Animal Embodiment

The necessary animal embodiment of mind has important ramifications, not just for philosophical dualism, but for various notions that rest upon the possibility of a disembodied mind and a mindless but otherwise animate body.

First, ghosts are precluded in or out of a machine, for no finite mind can retain its unity, individuality, or mental character without living embodiment. Conversely, zombies are precluded, for no animal can exhibit sentient and irritable behavior without the centralized subjectivity of mind, even in the lumbering, stupefied manner of the "living dead."

Since mind cannot be separated from its animal embodiment without forfeiting its mental identity, mind is just as mortal as the animal organism to which it is tied. Not only is an immortal soul precluded, but so is reincarnation. Although reincarnation keeps mind in one body after another, it presumes that mind has a persisting identity transcending its embodiment, allowing it to retain its individuality independent of any particular living organism. The possibility of brain transplants does not lend support to reincarnation, for such transplantation would involve the retention of mind in an abiding neurophysiological embodiment, rather than a complete separation of mind and body.

Finally, the general inability of mind to have unity, individuality, and mental character without animal embodiment calls into question the possibility of a purely immaterial divine mind. Whether embodiment renders mind necessarily finite and mortal and whether the divine can be without mind are problems with which religion must contend.

Part 2

THE SYSTEM OF MIND

CHAPTER 4

Psyche, Consciousness, and Intelligence as Irreducible Spheres of Mind

The subjectivity of the animal brings us to the realm of mind. As sentient and irritable, animals all possess mind, at least in the minimal sense of having a feeling psyche, animating an appetitive self-moving organism.

4.1 The Possible Forms of Animal Mind

Whether all animals have any further mental activity, such as being conscious, self-conscious, or intelligent, depends upon both what these activities are and how they are structurally related. If sentience and irritability necessarily involve consciousness, then every animal must not only have feelings and drives and move itself in function of them, but possess a subjectivity that treats its mental contents as determinations of an objectivity confronting it. If, moreover, a subject cannot be conscious of an objective world without being conscious of its own consciousness, and if desire involves both consciousness of objects of desire and of the subject's own appetites, then all animals would be self-conscious as well. Furthermore, if nothing can be apprehended as an object of consciousness without being understood in terms of concepts and judgments, and if propositional knowledge depends on linguistic intelligence and interaction with other intelligent interlocutors, then all animals will be discursively rational.

A more familiar situation confronts us if the feeling self can be without consciousness and if consciousness can be without self-consciousness, and both consciousness and self-consciousness can be without linguistic intelligence. Then animals can possess different types of minds in different stages of maturation and as fully developed individuals of diverse species-relative mentality, subject to varying partial realizations due to congenital impairment, disease, and injury. Whether these mental formations be stages of mental growth, permanent

species specific psychologies, or pathological conditions of either, they will be distinguished by how fully endowed they are with the possible types of mental activity. Some animals may exhibit a feeling psyche with sentience and irritability but no conscious distinguishing of subject and object. Other animals may be conscious but not self-conscious, whereas others may be self-conscious but dumb. And finally, some animals might have not just a psyche, consciousness, and self-consciousness, but the linguistic intelligence allowing them to possess the theoretical and practical capabilities that distinguish fully realized humans from speechless animals. And those that eventually possess a psyche, consciousness, and intelligence may only exercise these endowments in successive stages of development. In infancy, for example, mind may feel sensations and appetites, yet be unable to distinguish subject and object as consciousness requires. Similarly, in early childhood consciousness may first emerge before linguistic intelligence has been acquired.

Which alternatives are real possibilities may be corroborated by empirical observation, but their necessity as exhaustive options of mental reality can only be determined by the systematic account of mind in its totality. That account will not just encompass the fully developed realization of mind, but also the possible stages in animal mentality, distinguished by the separate realization of both different types of animal minds and different stages in the mental development of individuals.

4.2 The Minimal Reality of Mind

The starting point of the systematic account of mind must be the minimal reality of mind, since any further mental relations will either presuppose or incorporate it. Given how mind must be realized in animal individuals, the minimal reality of mind will be equivalent to the mental activity automatically in play in sentience and irritability, the distinguishing features of animal life. What type of mind, then, must all animals possess insofar as they are sentient and irritable?

Aristotle suggests in chapter 1 of Book Alpha of the *Metaphysics* that animals are universally endowed with sensation, as well as desire for what is sensed. Aristotle points out, however, that other mental endowments are not so generally shared in the animal kingdom. Animals do not all possess memory, on which intelligence and learning depends.¹ Memory-deprived animals further lack experience, which involves apprehending the connections between sensations and between the sensible things they reflect. Experience requires memory to keep sensations in mind so that their associations can be known. Without such unifications, sensation provides no experience of a unified world, whose things have determinate connections, as well as determinate unities of their own. If

experience is not universal to animal mind, art must also fail to be common to animals. Art involves knowledge of how to produce artifacts as something of a kind. Knowledge of the causal relations underlying production, which comprise formal, final, and material causality as well as efficient causality, is unattainable without the capacity to have experience. This is because necessary judgments of causal relations are unavailable to a mind unable to comprehend relations among individuals. Finally, Aristotle observes, scientific knowledge must be least generic to animals, for it depends on art, which only belongs to intelligent animals with knowledge of causes and their universal connections. Scientific knowledge cannot be had by animals lacking art because art's understanding of causes provides the basis for inquiring into the fundamental causes of all things that wisdom addresses. On Aristotle's account,² then, the minimal animal mind will have sensation, but lack imagination by which memory and association operate, experience wherein a unified objectivity is apprehended, and art and science where thinking employs concepts, judgments, syllogisms, and the intuition of first principles. The mind generic to animals will thus be confined to sensation, drives, and animation of the basic life functions of animal existence. That minimal animal mind will lack both consciousness, with its experience of a unified objectivity confronting subjectivity, and linguistic intelligence, with its activity of thinking.

Can, however, sentience and irritability be limited to just a psyche that senses and feels, without distinguishing objectivity and subjectivity as a conscious or self-conscious self, without enjoying imagination to remember and associate, and without employing words or thoughts?

Certainly, our experience of dumb animals at all levels of prelinguistic mentality suggests that animal mind can have forms without conceptual comprehension and its articulation in language. Dumb animals may signal one another through various displays in different media, but doing so hardly depends upon any universal understanding or communication. All that signaling expresses are particular perceptions and drives, but not general descriptions or argumentative claims concerning normative validity in theory or practice.³ Similarly, dumb animals, lacking mental capacities for generalization, are limited to fulfilling completely fixed specific drives restricted to some naturally given range of objects on which their species being makes them dependent. This is why similarities in such instinctual behavior are inheritable and unite members of a species in the same way in which physiological structure does.⁴ The situation is different with rational animals, whose conduct is set free from such inheritable patterns. Because rational animals are endowed with the universality of thought, they can abstract from the fixed wants to which instincts are directed, treat everything as a potential object of desire and use, and extend their goal-directed behavior beyond natural limits,⁵ generating different cultural formations and the history of their conventions.

Granted these mental differences, can dumb animals sense, feel, and move themselves in function of their drives without being conscious? Is sentience not irreducibly a form of conscious awareness that senses what is, employing its immediately given mental content to present what confronts it? And does not the fulfillment of drives involve not only consciousness of what provides their satisfaction, but self-awareness of the subject who has those drives?

4.3 The Primacy of the Psyche

The example of early infancy suggests how animals may lack consciousness as well as self-consciousness at the very beginning of their mental development and, by analogy, in their most primitive species beings. Even a human infant with the potential to achieve full linguistic intelligence shows at the outset no apprehension of any distinction between subject and object. Infant awareness can certainly be distinguished from sleep, but the feelings, drives, and behavior that infants have lack any discernible dependence upon an organization of mental contents into a unified totality that the mind then demarcates from itself as an objective world to which it relates as a subject. The subjectivity of the infant can more readily be understood to relate to its own mental/corporeal modifications simply as alterations of its own field of feeling, which directly entail bodily movements by which the infant immediately responds to its feelings and appetites, whether they be internally or externally generated.⁶ Suckling, crying at discomfort, or otherwise responding to hunger, thirst, tactile feels, sounds, smells, tastes, and sights, the infant can just be communing with its own mental registrations, without treating these as determinations of something objective. This is all the more likely given how these responses to perceived stimuli take place initially on a local basis, without the infant having achieved self-control of its entire body or having sufficiently focused its sensations so as to permit discriminating perception at a distance. Still largely lacking the ability to move itself about and perceive what lies away from it, the infant feels the divide of within and without as something merely diffusing upon its own sentient surface.⁷ Such primitive, undifferentiated feeling does not identify or characterize what it feels, nor does it involve the discriminating attention that allows the mind to direct itself to some part of its sensible manifold, selecting and distinguishing it from the background as an object to be known.

For this reason, despite mind's animal embodiment, it is not strictly true that mind must first be about the body, from which mind can then be about other things, actual, imaginary, or purely conceptual.⁸ Rather because mind, both in its minimal animal realization and at its developmentally primary stage, does not yet differentiate subject and object, feeling is not *about* the body. Mind,

as minimally the psyche, rather feels nothing but its own field of feeling. Such feeling is preconscious insofar as consciousness depends upon mind taking these same feelings and discriminating among as well as disengaging itself from them, to confront by their means an opposing world of determinate objects.⁹ To the extent that consciousness depends upon such feelings in order to have something to act upon in its distinctive way, consciousness presupposes the self-feeling psyche, which can function on its own. Accordingly, the self-feeling infant mind can exist both without and before consciousness. Insofar as self-consciousness involves the subject-object opposition of consciousness, the preconscious psyche of infancy need be no more self-conscious than conscious.

How an infant becomes not just awake and aware of its feelings, but conscious of its world and eventually conscious of itself as a subject confronting objectivity can only be understood by examining the character of the preconscious psyche and investigating the transformations it can and must undergo to provide for the emergence of consciousness. That further development can substantiate how the psyche not only temporally precedes consciousness but comprises a mental sphere both accompanying and making possible conscious awareness.

All this is precluded by the dualist view that takes the subject-object polarity of consciousness as fundamental to all mental activity.¹⁰ This position opposes mind to both the body and the objectivity mind confronts, rather than treating that opposition as a derivative achievement of an embodied individual, always already living in the world of which it is aware. Identifying mind with consciousness entails denying not only any unconscious or preconscious awareness,¹¹ but feeling, self-feeling, and habit. The latter so commonly accompany consciousness that denying their psychological reality is hardly believable. Yet feeling and self-feeling both lack the subject-object polarity. Feeling, unlike the sensing of an object, only registers a psychological manifold without treating it as the determination of something confronting the mind. In feeling, mind feels only itself, rather than sensing an opposing objectivity. Similarly, in habit, mind becomes inured to repeated feelings, drives, and associated behavior, without attending to any objective phenomena from which it has disengaged itself. For this very reason, individuals need not be conscious of their habitual performances, even though these have an objective dimension as bodily actions that can become consciously apprehended once brought to attention.

This possibility is indicative of how the contents of the psyche are susceptible of being brought to consciousness. Mind need simply treat its manifold of feeling as something with a unity of its own from which mind can disengage itself, thereby confronting an opposing objectivity. The global scope of this transformation encourages thinkers such as Searle to treat all nonconscious mental reality as in principle potentially conscious,¹² as if to retain the primacy of consciousness.¹³ Yet the conversion from implicit to explicit consciousness

does not rob the unconscious and preconscious domain of mind of independent mental existence, involving an awareness of its own.

Searle denies their mental independence by presuming that without consciousness all that remains are neurological processes that might serve as causal conditions of some further conscious phenomena.¹⁴ On this basis, “unconscious” desires and beliefs are merely neurological dispositions for conscious awareness and behavior that exhibits those desires and beliefs. Yet, if the “unconscious” is just the neurological process that is a causal condition for conscious awareness of that unconscious content, how does one distinguish that neurological process from the neurological realization of the actuality of the consciousness of what was erstwhile unconscious? On Searle’s terms both equally “cause” the consciousness in question. But then, what accounts for the neurological disposition underlying the unconscious from being merely the “possibility” rather than the “actuality” of consciousness? And what accounts for the move from that possibility to its actualization? What Searle completely ignores is that there could be neurologically realized mental processes that have “affect” and “subjectivity,” yet whose awareness does not have the subject/object polarity of consciousness.

Nevertheless, as Searle himself points out, there are mental states that are not intentional, in the sense of not having an object. Beliefs, fears, hopes, and desires may all always be about something, but nervousness, elation, undirected anxiety, and other aspects of mood lack intentionality.¹⁵ Searle does ascribe consciousness to some nonintentional states, such as a conscious experience of anxiety or elation.¹⁶ Yet in order for undirected anxiety or elation to be consciously experienced, and not just felt by the psyche, the individual must accompany its nonintentional feelings with conscious awareness of its own worldly situation. Then the self is conscious of its feelings for it is aware of itself confronting an objectivity in which it is practically and emotively entangled.

Conversely, Searle maintains that one may have beliefs of which one is not presently conscious and of which one may never have been explicitly aware.¹⁷ This possibility of unconscious beliefs, which are about something and therefore intentional, is supposed to distinguish intentionality from consciousness. It does allow for intentionality without consciousness such as infants may have in feeling hunger and thirst without yet consciously distinguishing subject and object. Appetites can be considered intentional to the extent that they are about what they desire.¹⁸ Yet they need not involve more than the psyche so long as mind does not disengage itself from its feelings and project them as determinations of a world it confronts.

Although unconscious beliefs as well as infantile appetites may allow for intentionality without consciousness, they hardly provide evidence of any non-intentional consciousness. Rather they invoke either the psyche or the mental arena of intelligence, where mind has contents that are intentional and about something, while at the same time recognizing that those contents are equally

mental in character, as recollected representations. Due to the subject/object divide constitutive of consciousness, conscious awareness can never fail to be about something *other*, unlike the psyche, whose feelings only register its own psycho-corporeal horizon.

Nonetheless, without the integral existence of the psyche, any abiding identity of the conscious subject becomes suspect. If selfhood is restricted to conscious experiences, the continuity of the self cannot be preserved unless one follows Berkeley to the implausible conclusion that consciousness is never interrupted.¹⁹ Yet, we do acknowledge that our consciousness is interrupted by sleep and still can recognize ourselves to be continuous abiding minds. As Popper suggests, what supports this persistence are two types of unconscious dispositions enabling the self to retain continuity during its normal intermittent states of wakefulness: on the one hand, abiding dispositions to behave unconsciously, performing the instinctual or habitual activities for which conscious attention is not required, and on the other hand, the continuity-producing memory of the immediate past which, as latent and unconscious, can be brought to consciousness through recall.²⁰ In both cases, the persisting independent reality of the unconscious psyche appears to be constitutive of the continuity of conscious awareness, bridging the latter's recurring interruptions.

Accordingly, there is no need, nor any possibility, of affirming the primacy of consciousness so as to sustain the intrinsic intentionality and centrality of mind, as Searle mistakenly suggests.²¹ That mind is a unified subject that always relates to some content is already secured by the psyche, which cannot feel any feelings without being a centralized awareness that is at one with itself by relating to its manifold mental modifications.

The living individual loses the unifying thread of the psyche only when a complete coma removes even the residual mental activity of sleep. In that case, the vegetative body becomes the only repository of renewable mental identity, awaiting the possible reawakening of unconscious dispositions, sentient irritability, and the recall of memory. When these pre- and unconscious dispositions become reawakened, however, how they integrate themselves with consciousness is always open to pathological disruptions threatening psychological identity. That possibility is itself emblematic of how consciousness is not the only form of mind, but necessarily finds itself accompanied by the feelings, moods, appetites, and habits of the psyche, *some* of whose contents may always have been made conscious.

4.4 Consciousness without Intelligence

If consciousness depends upon the psyche, whose feelings and dispositions accompany consciousness, giving it both background moods and habits, as well

as mental contents to become aware of, an analogous relation seems to apply between consciousness and intelligence. On the one hand, intelligence cannot come into being without conscious awareness and the psyche together providing access to mind's own determinations as well as confrontation with objects. On the other hand, intelligence will always be accompanied by both the psyche's self-communing sentience and consciousness's polarity of subject and object. This signifies that there must be a prelinguistic consciousness both preceding and lurking alongside intelligence's discursive rationality.

From Kant onward, this possibility has been rejected on the grounds that conscious experience is inherently discursive. This is allegedly because the correlative unities of consciousness and of the objectivity it confronts depend upon judgments, whose conceptual connections cannot be made without language and the intersubjective practice in which linguistic activity is both constituted and sustained.

Admittedly, consciousness can only take the psyche's manifold of feeling and disengage itself from it if that manifold can have an independent unity opposing mind's own subjectivity. Yet need discursive judgment be enlisted to provide that unification? Might the psyche and the elementary forms of consciousness have sufficient nondiscursive resources to engender and maintain consciousness's subject-object polarity, allowing dumb animals and prelinguistic children to be conscious and self-conscious? If instead thought and language were required for experience, could the acquisition of linguistic competence ever be explained?

Preverbal consciousness is hard to deny. Once infants begin to gain control over their bodies and unify their field of perception, they appear to have conscious intentional states without yet having acquired language or performing any speech acts. The same seems to hold for many mature dumb animals. As Searle observes, babies express their desire to have nourishment and attention, just as dogs signal that they want to go for a walk or believe that their master waits outside.²² Similarly, "wolf-children," raised in the wild without any human company, may remain dumb until reintegrated into a linguistic community, but they hardly lack experience of their nondiscursive world, navigating through its challenges with all the intuitions and representations that an intelligence without language can employ.

What makes these preliminary examples inescapably compelling are the perplexities confronting any account of the origin of discursive intelligence that denies prelinguistic consciousness. This perplexity applies as much to the original emergence of language as to the acquisition of language by individuals growing up within a linguistic community. Without a stage of consciousness without language, one must wonder how individuals could ever acquire linguistic intelligence in either predicament. For if mind could not even be conscious

without language, how could prelinguistic individuals apprehend other speakers and the world about which they communicate and distinguish themselves from words, things, and other interlocutors? Without that prelinguistic conscious capability, how could minds create communicable signs and develop the syntactical relations of genuine language, or recognize the signs and syntax that others have already mastered? This dilemma is simply ignored by all those from Kant to Davidson who presume that consciousness is inherently discursive. As Popper points out, when Kant suggests that the discursive *thought* "I think" must be able to accompany all our experiences, Kant completely fails to have considered how he himself could have experienced the utterances of others before learning language.²³

To the extent that linguistic intelligence depends upon the prior emergence of a prediscursive consciousness, which itself presupposes and incorporates a preconscious psyche, mind most fully comprises a system of three irreducible mental spheres: psyche, consciousness, and intelligence.

4.5 Psychological Genesis and the Self-Cultivation of Mind

However a single mind may progress from a preconscious feeling self to a prelinguistic conscious awareness and then to linguistic intelligence, these transformations may not just be stages in the mental development of an individual animal. They may equally comprise mental boundaries to which different animal species are restricted, leaving some forever preconscious, feeling selves, responding to their feelings without consciously sensing objects and the objective relationships of the world they inhabit, while leaving others conscious but always dwelling below the threshold of discursive rationality.

Determining what mental limits different animal species have is an empirical matter, insofar as their variety depends upon the contingencies of natural selection. Since that evolutionary process provides the biological preconditions of mind in general as well as the particular levels of mental activity in their successive realizations, the actual genesis of mind is equally a subject for empirical investigation. Nonetheless, conceiving the possible types of mind and the structural relationships of the different possible mental activities are proper concerns of the philosophy of mind. Because conceiving these constitutive relations determines what mental processes presuppose others, the philosophy of mind can establish what mental developments can be independently realized, as well as which must occur for any particular stage to emerge. For this reason, the completed conception of the exhaustive actuality of mind provides the basis for

comprehending the stages by which mind can become fully developed, both in the maturation of individuals and in the evolution of different forms of animal life.²⁴ By the same token, the comprehensive account of mental activity allows for understanding the different types of mental pathology insofar as these can be distinguished by deficits in the different spheres of mind and their relation to one another.

Although the complete conception of mind provides the key for understanding both the emergence of different types of minds in different animal species and the mental maturation of individuals, these two paths of development are fundamentally distinct. Their distinction rests upon the twofold predicament underlying the formation of mind. On the one hand, mind always involves capabilities whose limits are tied to its species being, its stage of maturation, and its health. On the other hand, mind, as subjectively self-active, proceeds from relating to its given animal embodiment to becoming what it has thereupon determined itself to be.

Due to this self-transformative character, mind cannot be characterized, in the manner of medieval philosophical psychology, as a thing with fixed properties. Doing so is incompatible with the subjectivity of mind, whose self-informing activity insures that mind is always at least partially determined in function of how it relates to itself.

Similarly, mind cannot be understood in terms of a causal interaction with its body. Because mind is constitutively animal in nature, mind can never act upon its body as if the body were an object apart that could be affected by a separate, disembodied mental causality. Although the embodied individual as a whole is prey to external mechanical and chemical influence, the body no more causes its own mind to be than the mind causally determines its own body. Whenever physiological conditions affect mental activity, they are always the conditions of a body already animated by mind, just as whenever mental activity affects the body, that mental activity is itself already embodied. Categories of efficient causality are simply inapplicable because the mind is inherently alive and encompasses the animal organism in relating to itself.

For this reason, the counterexample of zombies, so often invoked by contemporary dualists to separate mental functions from their embodiment, is incompatible with animal life. Zombies are alleged to have no mind, but to behave indistinguishably from actual humans, as if the animal body could exhibit its characteristic behavior without any mental activity. The self-activity of irritable sentience distinguishing animals from plants, however, can no more be detached from the inward mental animation infusing the body than mind can be detached from its own animal physiology.²⁵

This immanent connection of mind and functioning animal life equally precludes comprehending the relation of mind and body through the categories

of external teleology by which artifacts are determined. Life always involves an active "form" continually renewing its own process, replenishing its own substance and maintaining its individual configuration. Thereby life transcends the passive design of any product of technique, which can no more realize itself than sustain its composite existence. Moreover, mind's embodied centralized subjectivity enables the organism to be both receptive and active as a unitary self-controlled individual. This defies all the more any reduction of mentality to a form imposed upon an independently given material, since that form orders that matter, but not itself.²⁶

What renders "the mind/body problem" a phony dilemma resting upon a false dualism is that mind acts not upon the body as cause of effects, but rather upon itself as an embodied living subjectivity. Mind therefore *develops itself*, progressively attaining more and more of a self-determined character. This progressive self-formation is endemic to mind and it endows philosophical psychology with an intrinsic genetic component.²⁷

The resulting genetic psychology does not comprise any incremental accretion of homogeneous units, as behaviorism offers in its mechanistic analysis of the "growth" of mental functions.²⁸ Because mind transforms itself in its process of cultivation, adding new functions, mental development does not consist in repeated engagements of the same mechanism, like conditioned reflex or some other associative operation. Instead, as mind acts upon itself, it transforms its own mode of activity, as well as the mental contents with which it is occupied. This gives qualitative significance to the stage differences and the species differences in mental development. By contrast, on the mechanistic view of behaviorism, stage and species distinctions are reducible to merely quantitative additions or subtractions of the common elements that supposedly underlie all cognitive, emotional, and volitional growth. All global differences of structural organization are ignored insofar as mental development is reduced to the atomistic aggregation of segments of behavior, acquired by repetitions of the same mechanisms.²⁹ Because, however, every successive self-cultivation of mind acts upon and supplements whatever level of mental development has been attained, mind always comprises a totality incorporating some plurality of mental functions, structurally interrelated to one another in terms of the itinerary of development that has been traversed.

Although mind thereby eventually becomes in large part what it has determined itself to be, whatever this cultivation brings about remains predicated upon the innate structures with which mind is born. These reside in the inherited species being (subject to congenital deformation and mutation) to which each mind is joined, comprising the natural basis from which mind begins its ontogenetic transformations.³⁰ These innate structures are not so much the "innate ideas" called into question by classical empiricism as the inherited repertoire of

capabilities for dealing with the given world with which sentience and irritability contend. This is what Chomsky affirms in claiming that discursive minds possess innate schemas that make language acquisition possible once external stimulation activates them, providing contents contingent upon individual experience.³¹

Consequently, the genetic psychology of mind diverges, as Taylor observes, in a threefold way from its behaviorist misconception: First, psychological genesis is not atomistic, but holistic in character, continually developing a self encompassing all the different mental activities that self-cultivation accrues. Second, psychological genesis is not incremental, but transformational, engendering new modes of an abiding mind. Third, psychological genesis does not proceed in linear fashion from an external causal interaction with the environment, but develops from innate structures that define what aspects of the world will matter to mind's further self-cultivation.³²

Accordingly, mind's process of self-formation has a definite beginning in function of its necessary animal existence. Even though mind always engages in reflexive self-activity, at the outset mental process must have a given natural character through which it relates to itself. This given nature comprises the zoological dimension of mind³³ to the extent that mind is from the start encumbered with an animal species being involving a physiology with its own specific metabolism, sensory and locomotive equipment, and mode of sustaining itself within its biosphere. Although *we* have an anthropological nature, being born as homo sapiens, mind need not share our species being, which, being contingently given as any other, has aspects extraneous to mind per se. Mind, however, must be born with some animal species being through which mental life can be self-active, conditioned by the natural endowment upon which it can proceed to individuate itself through its own activity.³⁴ The philosophy of mind must leave aside the contingencies of natural selection and conceive what must necessarily be true of any animal species at each stage along the ontogenesis of the possible forms of mental life.

Accordingly, the philosophy of mind must comprehend the genetic mental development comprising the successive ways in which the always-embodied mind cultivates itself to become more and more thoroughly what it has determined itself to be. The succession of these mental way stations has a dual significance. On the one hand, it comprises an ordering of structural constitution, where preceding shapes are prerequisites for those that follow, either as temporally prior developments or as component constituents. On the other hand, because the latter stages presuppose the earlier ones, mental processes can appear independently in a temporal development. If it turns out that mind involves successive mental processes of the psyche, consciousness, and intelligence, then the psyche can emerge without consciousness or intelligence, consciousness can exist without intelligence but must involve the psyche, and intelligence can

emerge after the development of psyche and consciousness, but not without either. These possible independent temporal realizations can involve distinct species arising in evolutionary succession and/or existing simultaneously with different mental endowments, distinguished by greater or lesser inclusion of the various shapes that must always incorporate those that structurally precede them. The succession can also take the form of the mental maturation of an individual, whose mind undergoes a development of its own. At each stage in every case, the self-formation applies to a shape of mind possessing its own physiological dimension. Each stage in the self-cultivation of mind therefore comprises a specific mind/body unity.

4.6 With What Must Philosophical Psychology Begin?

With these prospects looming ahead and the material preconditions of mental activity identified, the systematic conception of mind can begin. The starting point is that which all further conceptions and realizations of mind presuppose and/or incorporate: the minimal form of animal mind, which is equally the minimal form of mind *per se*: the sentient irritable self comprising the psyche. Mind, as initially self-active with a given animal species being, minimally does nothing more than immediately register the determinations of its nature, feeling them as a psyche consisting in merely the feeling of its own sentient appetitive nature.³⁵ That natural, “zoological” endowment involves both its own internal physiological process and its interaction with the surrounding biosphere in function of its sensations, wants, and drives. Mind as psyche has nothing with which to determine further its own sentience other than the immediate sentient activity in which it initially consists.

What alone can vindicate the nonarbitrary character of this point of departure are two complementary aspects of the ensuing development of the concept of mind. To prove itself to be the true starting point of the conception and reality of mind, the psyche must involve no further features of mind, whereas all other mental processes must depend upon or contain the psyche. If the psyche did involve other mental processes, it would not be a true starting point, but already presuppose those mental dimensions it incorporates. On the other hand, if other mental processes proved not to presuppose or contain the psyche, other factors would have equal if not greater primacy as fundamental features of mind. Whatever the outcome, mind cannot be systematically comprehended unless its features are unfolded in terms of their structural constitution, making evident which aspects of mind rest upon and incorporate others. Only then

can mental processes be developed without taking for granted their constituent self-activities. That conceptual development alone can confirm whether mind necessarily involves a psyche, on which consciousness depends, and whether psyche and consciousness together provide the mental prerequisites of intelligence, which contains both.

SECTION 1

The Psyche

CHAPTER 5

The Nature of the Psyche

To be the basic form of mind on which consciousness as well as intelligence depends, the psyche must have its constitutive character apart from any trace of conscious awareness or discursive rationality. Otherwise, the psyche will forfeit its rudimentary position by presupposing aspects of conscious and/or intelligent mental activity.

Nevertheless, the elementary independence of the psyche is doubly relative. On the one hand, although the psyche may be prerequisite for consciousness and intelligence, the psyche presupposes all the nonmental features of animal life that underlie mental activity. There can be psychic processes without consciousness or intelligence in organisms permanently lacking conscious awareness and intelligence, as an initial stage in the development of individuals who later become conscious and intelligent, or as a result of pathological limitation. Yet nothing mental can proceed without enabling physiological conditions. On the other hand, because consciousness and intelligence cannot function apart from the psyche, but must subsume it within their own mental activity, the psyche gets subsequently modified upon figuring as a component of consciousness and of the linguistic intelligence that encompasses both psyche and consciousness.

First, however, the psyche's own minimal determination must be established, to the degree that all further mental realities incorporate it and cannot be conceived without involving its prior conception. Given that the most rudimentary form of mind is the psyche, that with which the determination of the psyche begins is the most minimal reality of mind. Whatever this may be, it must contain nothing else of mental character, while providing what all further mental process involves. If instead, the putative starting point already involves further mental content, that content will be more basic, supplanting the alleged minimal determination of the psyche as a viable starting point for the philosophy

of mind. Alternately, if not all mental process contains the minimal structure of mind presumably giving the psyche its primary foothold, that structure forfeits its place as the most basic and ubiquitous feature of mental life.

These considerations offer a dual mandate that only the subsequent determination of mind can fully confirm: the minimal determination of mind must consist of the basic sentient irritability of animal life, with all its inanimate preconditions, while not yet involving anything else of mental character. Moreover, that most elementary mental determinacy must be what all further mental reality includes. As such, mind is minimally the centralized subjectivity, whose sentience, drive, and motility animate the physiological reality of the animal organism. This sentient, irritable self is the ubiquitous subject whose basic “feeling of being alive” comprises the irrepressible “affective backdrop of every conscious state,”¹ as well as every realization of intelligence.

5.1 The Given Nature of the Psyche as Animating the Animal Organism

Mind has a given nature insofar as it constitutively suffuses the animal organism. Accordingly, mind is first to be conceived in a “zoological” manner,² in the broad sense of following out the natural endowment with which mental life is encumbered from its outset, be it that of *homo sapiens* or of any other animal species possessing mind. This treatment of the *nature* of mind is not final, for once mind manages to determine itself through its own activity, mind acquires a character that is no longer merely natural, but produced by mind itself. At that juncture, the philosophy of mind must move beyond anything merely “zoological.” Nonetheless, mind’s eventual self-formation can only arise from an initial shape of mental life relating to nothing but the given, natural qualities by which mind is immediately defined. Because, at the outset, mind has not yet given itself any of its own character, all mental life can minimally relate itself to is what it *is* by nature.

The psyche comprises this primary shape of mental life, initially defined by relating to itself as one with its given nature. What distinguishes the psyche from any more-developed forms of mind that it makes possible is this immediate, otherwise unqualified existence in and through the natural reality of the animal organism. Unlike consciousness, the psyche has not yet disengaged itself from what is given to it by being a living individual immersed in its biosphere. This lack of disengagement is precisely what must be overcome for mind to transgress the limits of the psyche and become conscious, and ultimately, discursively rational.

5.2 The Natural Qualities of Mind

The starting point of the philosophy of mind is provided by a basic proviso: mind does not determine itself *ex nihilo*, but belongs to an animal organism inhabiting a preexisting world. Consequently, however much mind may ultimately give itself character through its own activity, it must do so on the basis of *natural* features, given to it in virtue of the physical and physiological reality both encompassing and incorporated in mental life. These natural qualities of the mind comprise the immediate character of the psyche.

The given character of the psyche consists of universal, particular, and individual natural qualities since some pertain to the psyche per se, while others distinguish the psyche in respect to kind, while still others individuate the psyche. The universal qualities comprise the given features necessarily at hand no matter what kind of psyche is in question, whereas the particular qualities reside in the natural givens that necessarily differentiate one type of psyche from another, whereas the individual qualities are those givens individuating one psyche from every other. It makes sense to determine these features in the order of universal, particular, and individual because the universal qualities are determinable independently of their particular and individual counterparts, whereas every kind of psyche incorporates what they all share, just as individual psyches contain both what is generic and specific.

5.2.1 THE UNIVERSAL NATURAL QUALITIES OF THE PSYCHE

The universal natural qualities of the psyche consist in those features of nature that figure in the life of the psyche, no matter what its particular kind, nor what individuates one psyche from another. These necessary universal qualities comprise the general fabric of nature that encompasses and pervades any possible animal organism whose sentient irritability renders it mentally active. They internally and externally structure the organism to which mind constitutively belongs, thereby providing the given material with which mental activity can immediately occupy itself, be it as self-feeling, conscious, or linguistically intelligent.³

On the one hand, the external environment, in all its general mechanical, astro-physical, chemical, and biological character, enters into the natural determination of the psyche by being that to which mind finds itself related in and through its animal embodiment. On the other hand, these same natural features belong to the psyche's own organism, as constituents of the life to which it is entwined. More specifically, the generic animal processes of metabolism, growth,

reproduction, and sensibility and irritability all comprise ongoing functions that mark every psyche to some degree, underlying and penetrating whatever process mental activity entails.

Of course, what is genuinely necessary in these external and internal givens of mind is not simply the common fabric of terrestrial life as we know it, with all the contingencies of its carbon-based organic chemistry. Only a philosophy of nature can provide the universal biology, as well as universal mechanics, physics, and chemistry that can establish what is universal to the common enabling conditions with which mind as such is encumbered, whenever and wherever in the universe it may emerge.

5.2.2 THE PARTICULAR NATURAL QUALITIES OF THE PSYCHE

The qualities universally belonging to the psyche by nature get necessarily particularized due to varieties of natural environments and the species being of the animal organism.

What differentiate natural environments are astrophysical, geological, and climatic conditions, as well as the variety of life forms that themselves reflect the particular evolutionary pressures of their surroundings. All these factors impact upon the common processes of life, affecting metabolism, growth, and reproduction, as well as the sensitivity and irritability of all animal organisms within a particular environment. Hence, the particular conditions of life on Earth, for example, provide any terrestrial psyche with types of body chemistry, metabolic rates, and corresponding forms of sensibility and response that may be worlds apart from what other planetary or intergalactic abodes can support.

Compounding these particularizing factors are the different species beings of animal organisms in the same surroundings. The shared peculiarities of each species further group psyches into different kinds, marked by diverse physiological, sensory, reproductive, and behavioral endowments. As a result, members of the same species will share distinctive common natures that infuse their mental lives. Species specific metabolic rates, life spans, and biorhythms will all impact upon each and every mental engagement, situating mind within a distinctive physiological temporality.⁴ Similarly, the distinctive size and habitat of a species will condition how and with what the minds of its members interact. These conditions, are, of course, bound up with the specific set of organs, including in particular, sense organs, to which the mentality of a species is bound. Accordingly, the species being of every mind will endow it with specific modes of feeling, both internal and external. Moreover, since the species being of each organism gives it certain biological needs and ways of satisfying them relative to its specific environment and physiological structure, each mind will bear species specific ap-

petites and drives, involving distinctive stimuli-response connections, themselves regulated through the conative drive of the entire organism for self-maintenance and reproduction.⁵ Analogously, species specific forms of reproduction will endow minds with such shared differences as gender and sexual orientation, with their accompanying drives, appetites, and responses. This will involve instinctive nurturing urges and related behavior facilitating whatever care is needed to help offspring to survive.

Generally, natural selection will tend to foster whatever specific innate appetites, drives, and behavior patterns are necessary to enable each particular species to reproduce with success. Instinct will enter whenever the requisite activities are too routine to need habit formation or conscious attention⁶ or too elaborate to depend reliably upon the independent initiative of the animal.⁷ Whether spinning the most meticulously designed webs, following the most extended migratory paths, or conforming to the most differentiated divisions of labor in a community of related organisms, animals will find their minds endowed with a species specific natural psychology of sensory discriminations, dispositions, and behavioral modes relative to their physiological and environmental condition.

Furthermore, the species being of each mind will entail specific enabling conditions determining what dimensions of mind are physiologically supportable. Whereas some species may be capable of the full range of psychic, conscious, and intelligent activities, others will have psyches and conscious awareness without intelligence, whereas others will have psyches incapable of consciousness and self-consciousness. In every case, mind's given species being will endow it with specific possibilities. Although these will be contingently defined by the vagaries of evolutionary development, they will nevertheless be circumscribed by the exhaustive conceptual determination of mind, which delimits the possible totality of mental life, mandating as well what dimensions of mind must be at hand for others to function.⁸

Determining how mental capabilities differ among actual species is an empirical matter, given how the species being of organisms is contingently determined through evolutionary development. Similarly, identifying any mental differences predicated upon subspecies groupings is an inherently corrigible task, subject to all the limitations afflicting knowledge drawn from experience. Traditional attempts to derive mental differences from geographical, climactic, racial, ethnic, and gender groupings can be rejected on empirical grounds.⁹ This does not, however, preclude certain environmental conditions and corresponding species and subspecies identities from having implications for what kind of mind their members possess.¹⁰ All species will have some naturally given physiological character bearing upon mental capabilities, but how species and their subgroups compare to one another in this respect remains a contingent matter, requiring empirical confirmation. Needless to say, the proliferation of terrestrial life only

gives an inkling of what may be encountered on an intergalactic basis, where the diversity of species with minds would reflect different worlds and the different evolutionary paths that there might arise.

5.2.3 THE INDIVIDUAL NATURAL QUALITY OF THE PSYCHE

Because mind exists as a living organism, it involves given features not only universal to nature and particular to its species being, but unique to its individual reality. Each mind is individuated by the unique spatio-temporal itinerary of its life. This carries with it an individual genetic endowment, a unique history of environmental situations, and spatio-temporally located responses and interactions that uniquely condition the growth, development, and capabilities of every mind. In this respect, each mind is individuated from other members of its species by a unique given character involving an exclusive perspective on its uniquely developing situation. The species being of each mind may set particular boundaries upon its given endowments, but these all become individually realized in terms of the unique position which the organism occupies from its first emergence. Physiology, feelings, appetites, stimuli-response linkages, and dispositions to growth and maturation, all obtain a unique realization, giving mind a natural individuation, subject to supplementation by whatever self-imposed individuation mind may achieve through its own devices. For this reason, it is no surprise that infants are observed to manifest distinctly individual personalities as soon as they emerge from the womb,¹¹ just as they may seem to do in earlier embryonic stages.

No matter what may follow, the life of the mind will always be accompanied and pervaded by these universal, particular, and individual natural endowments.

5.3 Natural Alterations of the Psyche

Whereas mind continuously bears universal, particular, and individual natural qualities deriving from its being an animal organism, this same inherent immersion endows mind with successive natural alterations from which mental life is inseparable. These comprise naturally given stages in the development of mind, involving physiological changes that equally entail mental alterations in the abiding subject that animates the animal organism. Because these changes impact upon the minimal reality of mind that makes possible consciousness and discursive rationality, the natural development of mental life will also involve alterations in these higher dimensions of mind.¹² Since, however, the natural alterations are given, whether or not mind proceeds to these further forms of

mental activity, their basic features are conceivable in reference to the elementary reality of the psyche.

5.3.1 THE NATURAL AGING OF THE INDIVIDUAL PSYCHE

The metabolism of every animal is connected to growth and the maturation and reproduction that enable the individual to sustain itself and its species. Consequently, mind will be bound to the alterations that these physiological processes entail. To the degree that mind involves neurological processes that develop with the growth and maturation of the animal, these changes entail a natural development of mental functions. Compounding this neurological maturation is the maturing of sense organs and of the physiological instruments of response and movement, without which mind cannot engage in any mental processes involving and predicated upon action. Such processes include speech, as well as thinking, insofar as thought involves language and presupposes the activities of language acquisition. In addition, the sexual maturation of the individual entails a development in feeling, drives, response, and behavior, all of which enter into the life of the mind. Accordingly, the physiological maturation of the nervous system, sense organs, and other body parts that figure in action involve alterations in the mind that operates in and through them. In each case, the physiological maturation comprises a metamorphosis in the natural content to which mind must initially relate as its own given character, at hand in whatever it makes of itself. These metamorphoses will have not just a universal character bound to the generic birth, growth, and death of the animal organism,¹³ but particular aspects reflecting species being and environmental conditions, as well as individual dimensions due to the unique character of each organism with mind.

In all these successive metamorphoses, the individual psyche remains at one with itself, as the abiding unity of its physiologically conditioned mental alterations. These “zoological” phases of mind provide the ubiquitous background for any mental development arising from education, acculturation, or any other nonnatural activities.

5.3.2 SEXUAL RELATION BETWEEN PSYCHES

Whereas the biology of reproduction and its associated dispositions enter into the given character of each psyche, in the naturally given sexual relation between organisms with minds, each individual psyche encounters its common species being in engaging with its sexual partner. This engagement, can, of course, become accompanied by consciousness, as well as intelligence, and become molded

through behavior made possible by conscious awareness and linguistic interaction. Yet, on the rudimentary level of the psyche's natural determination, the sexual relation is a given feature, partaken in without having to be represented or invested with meaning.

On this basis, sexually reproducing dumb animals can possess drives and feelings deriving from sexual oppositions without ever being conscious or intelligent, insofar as drives and feelings need not involve conscious awareness or linguistic intelligence. Similarly, infants, who lack the consciousness and discursive rationality for which they have the potential, can have by nature impulses in their psyche rooted in sexuality.

Although sexuality derives from sexual reproduction, this does not mandate that sexual relationships given by nature be limited to heterosexuality any more than bisexual reproduction precludes members of a species from having any range of physiological sexual identities between the polar extremes of male and female. Whereas the mind of a sexually reproducing animal will possess by birth some sexual identity, how it sexually relates by nature to other minds is contingent upon the individual realization of its species being.

5.3.3 SLEEPING AND WAKING

Whereas the sexual relation presents a natural opposition where the psyche confronts another psyche sharing its species being, the alternation of sleeping and waking relates the psyche to its entire given character as a transitory phase of its existence to which it naturally opposes itself in another phase.¹⁴ Sleep reduces the natural totality of the psyche to a phase of itself, contrasted to a temporally distinct waking state, naturally alternating with sleep. Waking is not externally distinct from sleep, as in spatial juxtaposition. Rather, just as the present connects to the past and future, so the awakening psyche relates to the sleep from which it has naturally arisen and to which it will naturally return. As awake, the psyche is thus not undetermined by sleep, but exists in a waking *phase*, possessing that transient character only by having come from and reverting to its alternating slumber. Whatever be the activity of the waking mind, it is naturally affected by fatigue and subject to falling asleep, just as sleeping is naturally interrupted by a reinvigorated awakening until "the big sleep" ends this recurrent life cycle. Without taking any action of its own, mind by nature undergoes this double transition from sleeping to becoming awake and from being awake to falling asleep.¹⁵

To be awake is not of itself to think or will. Nor is it even a matter of mind simply finding a world confronting it.¹⁶ In waking, the psyche instead minimally confronts its own given nature, in distinction from the passive immersion therein by which it sleeps. So, for example, an infant will wake up, becoming

aware of its own feelings and wants and reacting accordingly without yet organizing its sensations into a world it opposes as a conscious subject.

Insofar as the succession of sleep and awakening is itself natural, it is a process that happens to the psyche, setting mind in relation to the opposition of its alternating states. Although the mind may eventually engineer its own sleep and waking, any such intervention is performed by a mind already subject to their natural occurrence.

Sleeping and waking appear to be ubiquitous phases of the life of the mind, given by nature to dumb animals and infants as much as to conscious and intelligent individuals. For this reason, comprehending sleeping and waking in their minimal natural givenness, that is, at the level of the psyche, requires excluding features experienced by anyone who seeks to *conceive* them. To figure merely as fixtures of the psyche, sleeping and waking must arise naturally without involving waking consciousness and intelligence or unconscious dreams containing subject/object distinctions or discursive rationality.

A sleep without representation occurs when the psyche, as common bearer of all its natural qualities, is submerged therein during a transitory state from which it periodically departs.¹⁷ In sleep, the psyche's relation to itself through these qualities is suspended, immobilizing the subjective centrality whereby feelings are all felt by the same self, instead of registering as local sensitivities, and all irritable reactions are executed by the same psyche as unitary responses, rather than localized tropisms. If such a condition were permanent, as in an irreversible coma, the psyche would be annulled, leaving behind a mindless, vegetative organism. As a transitory alteration, however, sleep allows mind to be indifferently submerged in its own natural features, as a way station to opposing them in natural waking, where it has the same features, but also relates to them as inhering in its unity. On that basis, every further mental activity will be situated within a naturally conditioned state of waking or sleeping.

The opposition between sleep and awakening is very different from the opposition of consciousness. The conscious mind relates to its own mental contents as something other, namely, the determinations of an objective world confronting conscious awareness. By contrast, the awakened psyche distinguishes itself from sleep, opposing two naturally given phases of the same psyche, rather than subject and object. The psyche as asleep is absorbed in its natural determinations without centrally relating to them, indifferent to any urge to react to any stimulation.¹⁸ By contrast, the psyche as awake relates to these same determinations as its own,¹⁹ operating as the controlling subject linking sentience and irritability. The sleeping psyche is that which has these natural determinations, comprising the otherwise passive unity in which they inhere. That unity has universality, as a one over many, but it is abstract, in that its unity does not determine the particular content of what inheres in it, nor specifically register it as a reflexive sentient

subject. By contrast, the awakened psyche has these same natural qualities, but relates to them as a centralized subject, at one with this, its self-differentiation.²⁰ To do so, the awakened psyche need not sense them as determinations of an object to which it is opposed. All that is required is that the psyche identifies its natural content as that to which it stands related as an encompassing self, acting unitarily in respect to its own feelings.²¹

Although being awake may thus involve a minimal self-relation, this does not make it equivalent to self-consciousness. Since no content is here distinguished from the psyche, the self-relation of the awakened mind does not contain the distinction of subject and object which self-consciousness requires. For mind to be self-*conscious*, it must have itself as an *object* of consciousness. Accordingly, consciousness of self still depends upon the subject/object opposition, without which mind cannot externalize its determinations as determinations of an object opposed to its awareness. The self that becomes an object of self-consciousness accordingly remains different from the awareness that has it as its object. That is, consciousness, the object of self-consciousness, is not equivalent to the consciousness of consciousness. Moreover, the self of self-consciousness is still subjective in being distinct from objects that are not the self. By contrast, the awakened psyche minimally distinguishes itself from sleep, the other phase of its own mind, without thereby being a self-related subject confronted with objects.

Accordingly, the generic difference between sleep and the waking state does not derive from that between the subjectivity and objectivity of mental representation, which Kant employs to distinguish dreams from experience.²² Sleep and waking do become invested with the categories of consciousness and discursive rationality when these mental arenas come into play. Nonetheless, as natural phases of mind that extend to subrational animals and infants, the sleeping and waking states have a more minimal differentiation, given independently of the higher mental activities they underlie.

Because the psyche is subject to the natural happening of sleep and awaking as the mind of an animal organism living in a particular natural environment, it is not surprising that the alternation of sleep and waking appears linked to such astrophysical alternations as night and day.²³ It is tempting to associate sleep with night in that night obscures the difference of things, which are ignored as sleep submerges mind in its own nature, whereas daylight allows the world to appear, enabling the waking self to find something to which it can attend. Of course, this association is relative to the particular sensory endowment of organisms, which may, as in the case of nocturnal animals, have more preferred access to the world in darkness than in light. Either way, these conditions presume that the alternation of sleep and waking opposes a state of mind that is self-absorbed and removed from interaction with the outer world against one that is turned

outward.²⁴ This assumes that waking involves mind relating not just to the given nature of the psyche but to the world in which it lives.

Such contrasts appear confirmed by familiar psychological observations. We become sleepy when the mind feels or imagines one and the same thing, as would be expected if in sleep the psyche distinguishes itself neither from anything in itself nor from the external world. Conversely, the mind fully awakes only when becoming aware of something with a differentiated and coherent content, reflecting how being awake involves relating to contents organized into an objective world confronting the waking subject.²⁵

Consciousness and intelligent behavior may always occur with the mind awake, but this does not mean that waking must always involve these mental activities. Otherwise all preconscious reality of mind would be submerged in continuous sleep, precluding any awakening of infants and those animals to which consciousness would be hard to ascribe. But how, then, is the psyche to be distinguished in its waking state from being asleep? Awakening need not be accompanied by any distinctive physiological activity, such as opening the eyes or otherwise moving the body. Nor need awakening be accompanied by any particular sensations. All that is required is that the psyche opposes its immersion in sleep, where it has no being apart from the natural features supplied by the animal organism. This opposition, however, is devoid of further content and the only source with which the psyche can immediately fill its waking state is supplied by the determinations it has by nature.

Yet how, then, can natural waking actually distinguish itself from natural sleep without already bringing in conscious confronting of an external world? The answer to this question is of key importance to saving mind from reduction to consciousness and accounting for the mental preconditions of conscious awareness.

5.3.4 THE AWAKENING TO FEELING

A plausible answer is provided by following Hegel in regarding natural waking as a transition to feeling, the naturally given sensibility where the psyche relates to its natural features as its own determinate being, without engaging in any conscious distinguishing of subject and object. Waking, as this transition, immediately ushers in feeling. Only if something else were the transition could there be some intermediary stage between waking and feeling. To awake naturally from sleep is then equivalent to coming to have feeling.

The sensibility of feeling is a naturally given endowment of mind, rather than a product of any mental activity. This is because the psyche cannot have any capacity to mold itself without presupposing mind's natural features and its

immediate relation to them. If the psyche is to act upon itself to give itself new mental character, the psyche must be at hand to be acted upon and the psyche must have access to its own given being without further intermediary. That is, mind must already have a natural character to which it finds itself in immediate relation. This immediate self-relation is feeling.

Characterizing awakening as coming to have feeling appears to go against the common notion that the sleeping individual is not impervious to all feeling and that what therefore separates sleeping from waking is the awakening to consciousness. From this perspective, to be asleep is not to become numb, but to fail to be aware of feelings as sensations of objects opposed to one's subject.

Aristotle suggests something approaching this view²⁶ by construing sleep as a state of inactivity of the psyche's common sense, which allegedly provides a united awareness of the different sensations. On this account, the sensations may still be operative during sleep, but the psyche is unable to pay attention to them until it awakes, whereupon the activated common sense enables mind to be aware of its sensations and perceive objects.

Waking up, however, need not involve consciousness if what mind awakens to are just feelings. Feeling does not distinguish subject and object, as conscious sensation does by sensing something other than itself. Feeling rather involves mind simply registering as a unitary subject all the modifications it finds given in itself by both internal and external processes. Since the psyche, mind as feeling, is the common subject of all its feelings, relating simultaneously to the excitations of all its sense organs and its own passions, it thereby functions as Aristotle's common sense, whether or not it further treats its sensible manifold as the sensation of an opposing objectivity. Asleep, the psyche lacks that self-reflexive centrality and merely registers excitations in the dispersed manner of the localized sensitivity of a vegetative condition.

If then feeling is what the psyche awakens to, the alternation of sleeping and waking can easily apply to infants and animals for which consciousness, let alone discursive rationality, is questionable.²⁷ Nonetheless, conceiving waking as the transition to feeling raises the question of whether sleep can be minimally defined as the natural state of mind devoid of feeling. Can such a characterization accommodate the common experiences of sensory stimuli either waking one up or influencing the content of dreams?

The first case can be explained by granting that sensory stimuli cause a physiological response making the individual awaken, without any intervening feeling. This could occur even if the stimuli would be felt if the recipient were awake. Sleep could still signify an intermittent suspension of feeling that does not sever all stimuli/response linkages, but retains a localized "vegetative" sensitivity. Similarly, sensory stimuli can effect dream formation without feeling so long as the physiological process of stimulation impacts upon whatever gets

dreamed without engaging the centralized self-reflection of the sentient self.²⁸ Once more, the influence could be manifest even if sleep leaves sensory stimulation unfelt, as well as unconscious.

Of course, it is debatable whether a mind operating solely at the level of the feeling psyche can have dreams during sleep. If all the psyche does is feel and feeling draws no distinction between subject and object, there would be little to distinguish feelings that are dreamt from those that are had when awake. If “feelings” are to be the content of dreams, they would be reducible to stimulations that lack the centralized self-reflexive relation to the psyche that waking involves. In that case, “dreams” would be no different than the submerged sensitivity of the sleeping animal. The distinction between a dreaming and dreamless sleep would be meaningless. For there to be dreams, more than feeling and more than the feeling psyche is required.

The connection of awakening to feeling explains why the alternation of sleep and waking states is not universal to life, but applies only to animal organisms, which are distinguished by sentience.²⁹ Plants may undergo metabolic alterations, including opening and closing flowers and leaves in response to the changing conditions of night and day, but these are automatic tropisms triggered by localized sensitivities, where feeling by a subject plays no role. Consequently, the alternating changes in plant states do not involve sleep and awakening any more than do periodic body rhythms of a vegetative, comatose animal.

It may be contingent whether or not all healthy animals must repeatedly fall asleep and awaken, rather than remain awake from birth until death. Aristotle’s argument that the organs of sensibility need some respite to maintain their activity is insufficient given how other physiological functions are continuously active.³⁰ In any event, where sleep and waking do alternate, mind finds itself situated by nature in recurrent phases of suspension and activation.

CHAPTER 6

The Feeling Psyche

Feeling may be suspended in sleep, but it can hardly be excluded if mind is to be at all determinately present to itself. Although mind, in its rudimentary shape as psyche, has natural qualities, it possesses these as given contents *to which* it immediately relates as determinations of its own character. By both distinguishing these qualities from itself and yet relating to them as identical to itself, the psyche feels them, and thereby, feels itself.¹ In this manner, the psyche has a self-related individuality, for it encompasses all its feelings as particularizations of a pervading self that remains related to itself in each and every one. Without this self-related individuality, there is no psyche, but only the natural givens of a vegetative animal physiology and the surrounding world. The psyche's self-relation in feeling, however, is immediate, for nothing mental is available at the outset to provide further mediation for how the psyche relates to its given qualities. Mind does not yet have any mental activities at its disposal by which to distinguish the content to which it relates itself as, for example, an objectivity of which it is conscious. Any such activities would presuppose the content that is distinguished, as well as an immediate relation to it. Otherwise, there would be nothing to differentiate as an objectivity, nor any access to it.

6.1 Feeling

The psyche accordingly minimally involves an immediate relation to its natural qualities in which it relates to itself while drawing no further distinctions. This centralized self-relation, which is all that mind initially brings to the organism it animates, is feeling. Unlike conscious sensation, feeling does not relate itself to a content it distinguishes as an object from mind, which thereby gets distinguished as a subject of experience. Rather, feeling relates to itself by registering

a content that is not further qualified. The content of feeling is simply what the feeling psyche *is*, in the bare sense of not being mediated by contrast to something other. The feeling psyche communes with itself without distinguishing its immediately given content from anything else or differentiating that content and attending to select elements therein. In this respect, feeling feels a minimally mental content. It does not sense or represent anything, for feeling is not something mind differentiates from any other factor to which it thereby relates itself. This includes the psyche's own body, which feeling does not feel in distinction from its own sensitivity. The psyche feels only its own feelings and is thereby not yet aware of either its brain, the rest of its body, or any other thing that may subsequently become an object of consciousness or intelligence.²

Accordingly, feelings are not appearances, properly speaking. Because the psyche does not relate itself through feeling to anything else, such as some determining source, feeling is not felt as the manifestation of anything else. Nothing *appears* to the psyche in feeling.³ By the same token, feeling is not susceptible of illusion or of being mistaken. Because no subject-object opposition enters into feeling, feeling is not subjective, in the sense of being opposed to something objective to which it may or may not correspond.

Feeling is, however, subjective in being bound up with the individual natural reality of the psyche. Although this reality reflects the universal features of nature and the particular communalities of species being, all the further individuating aspects of the psyche insure that feeling has a givenness unique to each psyche. This is because in feeling, the psyche is nothing more than a feeling of what *it* immediately is. Everything else that may otherwise characterize the psyche is left out of account in the feeling it has. The psyche accesses through feeling only its current feeling in all its momentary atomistic givenness, unlike consciousness, which can know objects that are not sensibly present.⁴ Nothing abiding and necessary about the psyche's own reality can be felt as such. Consequently, the "self" with which the psyche communes in feeling is utterly singular and contingent in character. In order for mind to relate to itself as something having a universal, necessary, communicable character, more than feeling must be enlisted.

Because feeling is immediate in content and in form, the psyche need not do anything else in order to have feeling. On the contrary, in doing anything else, the psyche operates on the basis of having feeling, for the psyche feels by nature rather than as a product of any other mental engagement.

In so doing, the psyche is one and simple in its given concrete content, for in each and every feeling the psyche is the same immediate relation to what it is by nature. In this respect, the psyche exhibits universality, as that one in many, holding the feelings together simply as its own.⁵ Because feeling is simply given, the psyche is here a passive receptacle of the natural features that it registers without yet altering their content.⁶ In this, its minimal guise, the psyche consists

entirely in being this unity of what it feels itself to be by nature. The psyche here has no mental actuality apart from its feeling, and hence, no particular reality of its own to contrast with this content. Consequently, if, by way of anticipation, one were to adopt the first-person stance of the ego, one could say on behalf of the preconscious, prelinguistic psyche, I am what I feel and I feel what I am.⁷

Inherently involving neither consciousness nor intelligence, feeling can be had by animals who lack conscious awareness and intellect, as well as by persons who have not yet matured to the point of realizing their potential to become conscious and intelligent, or have lost these capabilities through injury, disease, or aging. Here phylogenesis and ontogenesis come together: what comes first in the mental evolution of animal life forms comes first in the development of the individual mind, as well as last in its mental degeneration.

Animal physiology does entail that the content given to the psyche in feeling has its source partly internal and partly external to the body of the organism, as mediated through different sense organs and nervous-system conduits. In the absence of some such physiological system that registers bodily states arising from within and without, the psyche could not immediately relate to itself through the natural features of the organism. Because animal life already possesses a self-reflective process, where distinct organs record modifications of the whole organism, the psyche can be self-related in the natural life it invests by encompassing the "feedback" physiology of neural sensitivity. By itself, this physiological "feedback" is not yet feeling, for unless a higher unity stands in relation to the "feedback," it is just another physiological connection whose own linkage is not itself registered. Feeling supervenes when the psyche finds its *own* natural content in this self-reflective physiological process, whereby the psyche relates to itself in a form with an immediately given self-relation. In doing so, however, the psyche is not relating to a process that itself refers its registered modifications back to their sources inside and outside the organism. The registrations are simply given by themselves.

In each case, feeling must have some neurologically registered physiological modification to which to refer. Otherwise, the psyche has nothing in itself to feel. Hence, psychological contents are not felt unless they are given in connection with some such physiological expression. For this reason, once the externalization of emotion runs its course as a physiological event, the concomitant expenditure of feeling may have the cathartic effect of ridding the mind of the expressed emotion.⁸

Feelings having inner sources might seem distinguishable from those having external sources in line with the distinction between passion and sensation, according to which passion involves a psychological content externalizing itself in a physiological expression and sensation involves some external stimuli getting neurologically registered. At the level of the psyche that only feels, however, any

inwardly determined feeling cannot be the expression of an independently given psychological content, for the psyche does not yet have any content apart from the physiological nature it finds as its own. Only with intelligence does mind relate to contents that count as both mental and objective. For this reason, animals that lack intelligence cannot be said to have emotions properly speaking, if emotions, in distinction from feeling, give physiological expression to separable psychological contents involving estimations of how the world conforms to a subject's own purposes.

Similarly, mood is not yet at play in the minimal determination of the awakened psyche to the extent that mood comprises a tone of feeling that pervades mental activity for some time. Mood may be felt, but only as an enduring background for other feelings. Whether the waking mind must always be in a determinate mood depends upon the existence of a persisting framework of feeling. Whether or not this is bound up with the identity of the psyche as a feeling and self-feeling subject remains to be seen. In any event, mood will be parasitic upon the rudimentary character of feeling in general, which must first be established.

By way of anticipation, one can allow for inner feelings that owe their content to corporeally realized psychological representations and intentions. These, however, all depend upon mental activities that transcend the psyche. The internal feelings immediately given to the psyche are strictly involuntary and unrelated to conscious intelligence.⁹ This is true of feelings originating both in external stimulations of sense organs and in the species-specific irritability of the animal organism. Sensory sensations and drives are not merely mechanistically determined by external circumstances but bound up with the self-sustaining metabolic or reproductive functions of the animal organism. Nonetheless, they initially involve mental contents that are not yet products of any prior mental activity, whether of the psyche, consciousness, or practical intelligence. By the same token, feeling as minimally determined does not have embodiment involving gesture, for gesture presupposes that the psyche has made the body an instrument for expressing feeling that, as such, already has a given corporeity.¹⁰ Nonetheless, because feeling is related to the given natural character of the psyche, it has a physiological, worldly embodiment that can be observed by others.

For mind itself to distinguish the inner and outer stimuli of its feelings, as well as the organs that convey them, the different grounds of feelings must somehow be registered in connection to each feeling. The immediate relation of feeling to its content precludes, however, any felt distinction between feelings in respect to differentiated sources. The psyche has feeling without further qualification, just as the feeling it has is, as feeling, not further discriminated internally nor connected to any mediating factors. Consequently, any difference in provenance of feelings cannot be drawn within feeling. The felt content may indeed contain all the specifically variegated character deriving from the actual

physiology of the feeling organism, including the particularities of its sense organs, internal bodily sensations, drives, and species-specific environment. The immediate way in which feeling takes in this content, however, leaves all additional characterization a matter for further mental activity.¹¹

For this reason, feeling does not “locate” itself in the particular place where felt physiological modifications occur. Because each and every feeling of the psyche is felt as a determination of the same psyche, which, as feeling, is always in immediate self-relation to its given nature, feeling does not have any spatial extensive magnitude. Although feelings may be physiologically tied to sense organ stimulations, drives, and related irritable behavior, any attribution of feeling to a particular internal or external source depends upon the addition of further mental mediations, allowing for perception, with consciousness of one’s body and its environs. Until that addition is made, the psyche can only refer its feelings to itself, the common centrality of them all. The psyche is thus the unitary psychic field of feeling, always communing with its encompassing self, no matter what physiological occurrence is being registered.

Not until mind becomes conscious can feeling be felt *as* either proprioception (the sensing of one’s muscular and joint activity) or interoception (the sensing of one’s visceral condition). Only when consciousness distinguishes subject and object can feelings count as sensations *of* the body’s objective condition, exertions, and position. For this reason, the psyche’s feelings are not just as cognitive as any perceptual sensation, as Damasio erroneously maintains.¹² Although feelings are always connected with neurological excitations usually tied to other physiological modifications, feelings relate the psyche solely to itself, rather than providing knowledge of the brain, the rest of the body, or both in their physiological totality.

Nevertheless, feeling will have a manifold quality, given the qualitative distinction of its physiological sources. These have a philosophically determinable character to the extent that the philosophy of nature can determine the possible modes by which physical and physiological reality can register with the animal organism. This will allow for conceiving the possible modalities of sensibility.¹³ It is contingent which of these modalities may function in any animal organism, given the particularities of astrophysical formations, evolutionary developments, and the congenital endowments and health of the individual animal. Aristotle may privilege tactile feeling as the primary sense, without which none of the others can function as means of perception.¹⁴ Yet one can wonder whether an animal might be entirely numb due to injury, disease, or congenital limitation, yet still have some other sense modality, however impaired this might leave its survival, allowing it at least to feel, even if unable to sense an opposing objectivity, perceive things with properties, or understand the dynamic relations of force and law. If this other sense modality could not provide any proprioception, enabling the

animal to monitor its own movements and body position, it is hard to imagine how the animal could sufficiently control its own activity and successfully nourish and protect itself, let alone reproduce. Whatever the case, the psyche will feel in virtue of at least one such sense modality, in addition to whatever internal feeling gets generated by its need and drives. Nonetheless, feeling itself has no resources for characterizing these qualitative differences. By being immediately given to the psyche, each feeling is singular and devoid of anything that specifies how it is discriminated from others.¹⁵

Owing to their immediacy, feelings will not universally endure, nor be otherwise organized in any abiding pattern. Instead, they will be single and transient contents of a psyche,¹⁶ which, as immediately feeling, will have a similarly immediate identity as the abiding subject of these involuntarily suffered modifications of itself.

Despite their qualitative variety, all feelings have intensive magnitude. This is because the simple ideal unity of the feeling psyche and its unmediated content allows for variation that is indifferent to qualitative differences and external juxtaposition.¹⁷ Insofar as mind pervades the whole body without having any other specific location of its own, mental contents, unlike their neurological realizations, cannot be spatially related, but only temporally ordered. Moreover, since the psyche does not have any resources for qualitatively discriminating its feelings, whatever differences it feels will have to register quantitatively, yet without the adjacency of extensive magnitude. This provides for variances of intensive magnitude, whose degree abstracts from quality and aggregation. Comparing degrees of intensity of feeling, however, will require some further mental facility capable of relating present and absent feelings to one another.

Although feeling may be more or less intense, it is not, of itself, pleasant or painful, let alone gratifying or ungratifying. To be qualified as gratifying or ungratifying, feeling must figure within the more developed mental context where mind, on the one hand, desires some object, and, on the other hand, perceives the satisfaction or nonsatisfaction of its desire.¹⁸ Thanks to these conscious accoutrements, feeling, whatever its sensible modality and intensity, can further be gratifying or ungratifying. Having gratifying or ungratifying feelings may thus presuppose consciousness, but this does not preclude preconscious infants or subconscious animals from having pain or pleasure in the more limited sense of feelings tied to responses of avoidance or attraction, rooted in the *nisis* for self-maintenance of the organism.¹⁹ Even here, though, the connection to avoidance and attraction is not manifest in the feelings themselves, but only in observable behavior. That behavior, as a function of irritability, may be intrinsically tied to feelings of lack, that is, to drives and need,²⁰ but these feelings only implicitly manifest what they impel.

These limitations in the content of feeling cannot be surmounted by appealing to feeling to qualify itself. This might appear to be a viable option, since feeling is the only resource immediately available to the psyche with which it might mediate feeling and register that mediation. That is, mind could perhaps have a feeling of feeling. Such a second order feeling, however, would be, *qua* feeling, just another immediate content to which mind stands in immediate relation. Consequently, the relation between feelings would not fall within any of the feelings, but would require some other mental factor to maintain and note the connection.

6.2 The Psyche as Subject of Feeling

In being a compendium of feelings that are immediately given in singular and transient succession, the psyche relates to itself as a feeling subject, encompassing the entire psychic field without opposing anything else. Admittedly, the psyche here feels its feelings as something it involuntarily suffers, but in so doing, it equally has its feelings in virtue of feeling them. That is, what the psyche feels are not just passively endured modifications of its own given nature, but its own relating to that content.²¹ This dual character of feeling is aptly captured by how “feeling” designates both what we feel and how we feel.²² The specifically psychological nature of feeling is herein evident. Instead of being qualitatively determined by the animal organism it pervades, the psyche renders the qualitative determinations it feels elements of its own self, mediated by its own mental activity. The psyche has them *by feeling them*, and thereby secures its own identity as a feeling psyche, determined by how it relates to itself even if first relating to how it is by nature.

To characterize this second stage in the constitution of the psyche, Hegel infelicitously employs the term “consciousness,” maintaining that the feeling psyche attains a consciousness of sorts in its sensations of its own totality. This consciousness, however, is not yet objective, but only subjective because what the psyche opposes itself to is not an objectivity from which it is disengaged, but rather its own sentient manifold, which remains the sole content of feeling.²³ Such a characterization invites Cartesian notions of a purely subjective consciousness, whose self-awareness operates independently of both consciousness of a nonself and the corporeal immersion of the psyche. Here, however, all that lies at stake is the self-relation of the feeling psyche, which involves neither an objective awareness nor a self-consciousness, which has its self as its *object*. The key point is that the mind can be self-related without being conscious or, for that matter, self-conscious. In having feelings, the psyche relates to its own

given content in virtue of what it has felt. What it relates *to* is not an object from which it is disengaged, but its own self as determined through the physiological sensibility of the psychic field. This is a purely subjective awareness insofar as it remains enclosed within the psychosomatic boundary of the individual animal organism, whose mind therein relates only to its own feelings and feeling self. These feelings can be distinguished from the feeling self as particular and universal dimensions of the individuality encompassing both. That is, in relating to its own feelings, the feeling self relates to its own particularizations, of which it is the pervasive unity, the universal bond which itself contains its feelings in their entirety, thereby comprising the individual uniting the particularity of feeling with the identity of the psyche.

Although the self-relating of the feeling psyche takes place within and entirely with reference to the embodied totality of the psyche, it initiates a relative detachment from mere immersion in the natural life with which mind is endowed. In feeling, mind communes with what is immediately given about its own existence, prior to any further formation through mental activity. What the mind feels about itself is thereby singular and contingent, lacking any mediation that could impart universality and necessity. Yet, by accessing felt content through its own feeling process, the psyche is already separating itself from its given life by relating to it as what *it* feels.²⁴ Just as the nervous system has a distinct reality within the organism it registers and regulates, so the psyche distinguishes itself from the natural life on which it supervenes as an animating sentient self. Through feeling, the psyche makes its given determination something mediated by its own relation to them, thereby relating to itself and so becoming self-related. Instead of just being what it registers, the psyche is the registering of what it feels and what it feels is what it feels as its registered content.

Because the self-same psyche feels each and every one of its feelings and, in so doing, feels itself in them all, the feeling psyche is the totality of all its different sensations in their simultaneous and sequential happening. These become actual only by becoming felt by the psyche, which persists and remains self-related throughout their transient flow.²⁵

Although the psyche connects through feeling only to its own self-affections, in doing so it still has a living being embedded in a biosphere whose contents never entirely register in inner and outer sensation.²⁶ In awakening to feeling, the psyche may relate to the natural relationships in which it is submerged in sleep, but in doing so there is always some residue that remains outside the psychic field. The psyche does oppose itself to the contents it feels, as the encompassing individuality of its particular transient states, but this opposition remains shut up within the psyche, leaving mind still oblivious to any relationship to something else.²⁷

Unlike the conscious ego and the linguistic agent, the psyche achieves self-relation neither by differentiation from an objective world nor by interaction with another subject. To be self-related, all the psyche needs is its own feeling and the natural animal life through which it courses. On this basis, the psyche has only one contrast available to it, that between the psyche's own mental contents and itself as their possessor. The psyche cannot, however, ascribe part of its mental manifold to itself and part to something else, for that would be tantamount to positing a nonpsyche, an external objectivity. Consequently, as Willem deVries observes, the contrast between the psyche and its contents cannot exhibit itself as a distinction between different kinds of feelings, "feelings of self and feelings of a not-self." Rather, all feelings are just the psyche's own, and for this reason, in every feeling, be it sensation or drive, the soul feels itself and is always self-feeling.²⁸

Nevertheless, the self-feeling of the psyche is still not without a certain range of modalities that fill the preconscious life of mind. Hegel provides a partially viable guide, proposing that the psyche has three basic ways to relate to its feelings, comprising successive modes, the first incorporated in the next, which must be supplanted to arrive at the third. These three stages exhaust the preconscious reality of the psyche insofar as they together provide the prerequisites for conscious awareness.²⁹

The first stage consists in the psyche's immediate, undifferentiated unity with its natural life, where its feeling of what it is amounts to a dim reverie of its concrete being. Although the sentient psyche is awake, because it is limited to feeling, it cannot differentiate, discriminate, or further identify what it feels itself to be, nor apprehend any relationships that would allow its feeling to convey something objective that could be distinguished from the subjectivity of its contents. Hence, its feeling only indistinctly takes in what it is and does so in a manner devoid of subject-object distinctions, rendering its waking state hardly different from dreaming.

By contrast, the second stage consists in the process where the psyche is divided against itself into one aspect in which it is the all-pervading master of itself and another aspect where it is held fast in some isolated particulars of its actuality, in some array of feeling from which it cannot extricate its encompassing individuality. Hegel describes this stage as one of insanity, but his account of insanity ends up involving a division of a more developed stage of mind that contains conscious intelligence pathologically failing to integrate its psyche with the operations of rational awareness. This opposition systematically presupposes the development of consciousness and intelligence, and therefore should and will be treated³⁰ after these mental spheres are determined. Consequently, the second stage in the life of the psyche cannot involve such insanity, but something else in which the division is truly internal to the psyche. What exhibits this

self-opposition within the psyche is the development of habit, where the psyche distances itself from recurrent feelings and accompanying behavior, becoming accustomed to them and focused elsewhere.

The third stage brings the psyche to the point of enabling mind to be conscious. Here the psyche treats its living body as a subservient means for expressing its feeling. In so doing, the psyche projects from itself the residual felt content that does not belong to its mastered bodily nature, engendering an opposing domain that can count as an objective world to a psyche that faces it as a disengaged, yet embodied ego, conscious of a nonego.

To what degree this itinerary commands support must be established by following out the rudimentary process of self-feeling with which the psyche is endowed.

6.3 The Feeling Psyche as Immediately Given

As sentient, the psyche is not merely a physiological entity, confined to a vegetative existence. In feeling what it is and in being what it feels, the psyche is an inward self, unitarily possessing all its particular sensations irrespective of the external dispersion of their physiological processes. By being that which feels them all, the psyche's encompassing unity is differentiated from these sensations, which signify not yet external objects of which it is conscious, but only transient aspects of its own abiding omnipresent sentience.³¹

Because the feeling psyche still has no other particular determinations than specific feelings and its abiding self-relation to them, the temporal succession of its sensations is not something to which it has access. What is felt is not the relationship of past and present sensations, but only one feeling at one moment. In order for a sensation to be felt in its temporal succession, feeling would have to surmount its own constitutive immediacy and register present sensations as mediated by their temporal order. The psyche relates to itself in having each and every one of its feelings, but in order to feel their succession, the psyche would have to sense its own duration as the persisting substrate of these, its own transient contents. Although the psyche is inherently embodied, sentience is insufficient to enable the psyche's body to provide an enduring backdrop for the succession of its feelings. Until conscious perception is at hand, no spatially determinate "body image" is available with which the psyche can identify itself. Moreover, without imagination to associate past and present perceptions, the mediations of temporality fall out of view.³²

The unity of the psyche is completely formal, neither determining the qualitative content of its feelings, nor investing them with temporality or any other relationship beyond being felt by the same psyche. Nevertheless, the individuality of the psyche, bound as it is to a particular body in a unique relationship to a specific environment, renders the psychic field a particular world of feeling comprising the persisting identity of what the psyche feels itself to be.³³ That the psyche comprises one such world among others, is, however, not felt as such. The plurality of psyches can only be registered by a mind that can distinguish itself from what it is not, disengaging itself from its object, and becoming conscious of a world of things and other minds. This differentiation lies beyond the subjective unity of feeling.

To the degree that the psyche can exist without consciousness or intelligence, while being a prerequisite for these further spheres of mind, the life of the feeling psyche warrants determination first in its own right. Once consciousness and intelligence have been accounted for, the psyche can be treated as a stage in mental development, an accompanying background to discursive rationality, and as a morbid condition to which conscious intelligence becomes reduced through mental damage or illness. Then, the feeling psyche can be considered in respect to relationships with other minds that are endowed with not just feeling, but consciousness and intelligence. All of these considerations, however, depend first and foremost upon what the sentient psyche is as such.³⁴

As immediately given, the feeling psyche is passive with regard to its content. Although what the psyche feels is for it in virtue of being felt, the psyche's pervasion of all its feelings still leaves undetermined what it feels from moment to moment, as well as how its feelings are otherwise related. Similarly, although the psyche has drives as well as sensations, the activities of its animal irritability remain, to start with, something given, rather than novel actions whose contents are newly produced by some engagement of mind. The feeling psyche feels, but the immediate process of feeling neither alters the content of any feelings, nor imposes any new order upon their occurrence and related behaviors, nor focuses attention upon any particular focal points of its psychic field.

Nonetheless, feeling does not just feel the given life activity of mind's animal organism in its purposive metabolic relations with its environment and its equally purposive activities of nurturing and reproduction. Feeling is equally, as Macmurray puts it, a "moving-feeling," minimally differentiated by nature into positive and negative feelings of pain and pleasure, directing respective movements of attraction and avoidance, without yet comprising an awareness of any subject-object opposition or conscious purpose.³⁵ Insofar as animal life has sentience, motility, and urges to set itself in movement, the psyche immediately feels as a motive force of its natural being, simultaneously registering sensations

from the ongoing interaction with its biosphere, while not yet apprehending more than its own feelings. In so doing, the psyche does not *compare* and *distinguish* its feelings of comfort and discomfort, for to do so would require some further mediating engagement holding them together for mind. The psyche instead simply feels them, motivating whatever response is mandated to serve the organism, all without need of consciousness.³⁶ This is why infants who have yet to distinguish subject and object, unconscious adults, and distracted rational agents can all have feelings engendering functionally appropriate behavior while paying no conscious attention to what they are doing.

6.3.1 PSYCHOSOMATIC INFLUENCE

The feeling psyche, in virtue of animating its worldly embodiment, is readily susceptible of influence, affecting the content and succession of its sensations. The source of such influence may be inorganic or organic, and if it is something alive, the influencing organism may be endowed with mind of any level. Accordingly, the feeling psyche is subject to manipulation by another mind and controllable to a greater degree than any shape of mind that exercises any power over its own form and content. With respect to sensation, consciousness and intelligence may always be directly influenced, but those other mental processes that are preeminently self-active, rather than passive, will only succumb to external determination through some initiative of their own.

In cases where one mind influences the sensations of another, the affected psyche still remains formally self-related in what it feels, simply by feeling each of its affected sensations. Nonetheless the self of the controlling mind could be said to have a material influence, making it the determining “genius” or Svengali behind the quality and ordering of some, if not all, of the other’s feelings. Of course, what enables one mind to influence another’s feelings are the embodied expressions by which the former individual can impact upon the embodied psyche of the latter. Without the embodiment of both minds, the “vibes” of one cannot affect those of the other.

Presumably, not all the sensations coming from without can have their source in another mind, nor can one preclude sensations coming from within the affected psyche. With the possible exception of a fetus sentiently affected by its pregnant mother whose enclosure shields it from other external stimuli, all psyches will receive sensations from the environment in addition to whatever feelings some other mind may produce. And even a fetus will presumably have internally generated sensations and drives that cannot be derived from its mother. Consequently, the controlling and controlled minds can never form a completely undivided psychic unity.³⁷ Sentient mind control by another will always be partial.³⁸

To influence another sentient psyche, however partial that influence may be, the controlling mind must use its own body to produce some psychosomatic effect on the latter. This control can, of course, be exercised voluntarily or involuntarily. The feelings involuntarily experienced by one mind can directly influence those of another, as when psychosomatic changes in a pregnant woman affect the sensations felt by her fetus,³⁹ when a hungry baby's cry produces a surge of the hormone prolactin in the mother, both facilitating nursing and soothing her,⁴⁰ or when the crying of one newborn infant leads others to do the same.⁴¹ Alternately, a person can purposefully take some physical action to alter the feelings of an infant, a dumb but conscious animal, or another intelligent individual. In every case, the influence can affect the feeling of an individual without that individual either being able or happening to perceive the controlling source. As long as some psychosomatic interaction occurs, control can be exerted.

For this reason, a subject can be put into a hypnotic trance, submerging consciousness, and still be subject to suggestion. To be put in the hypnotic trance in the first place, the subject must have consciousness as well as linguistic intelligence, just as much as does the hypnotizer. This is because the hypnotizer acts consciously upon a conscious subject, using language to facilitate the immersion in hypnotic "sleep," commanding the subject to focus on an isolated, reiterated perceptual stimulus, in oblivion to the contextual relations that allow for conscious distinguishing of subject and object. Hypnotic suggestion then employs speech to influence the unconscious psyche, relying upon the submerged linguistic capability of the subject and the passivity of feeling.⁴² Although hypnosis relies upon the psyche's susceptibility to immediate influence, the hypnotizer exercises influence over another mediated by consciousness and intelligence.

An individual who is conscious and intelligent can deliberately influence a psyche lacking language, but possessing some degree of consciousness, when, for example, someone chooses to affect the feeling of an animal or a young child. Similarly, a person can deliberately wield influence over a psyche lacking consciousness, as in the case of someone affecting the feelings of an infant or an analogously preconscious animal. In each of these cases, the influence upon the psyche is mediated by the consciousness and intelligence of another. The analysis of such relationships thus depends upon an account of not just the psyche, but consciousness and intelligence as well.

Where the psychosomatic reality of the feelings of one individual directly affects those of another, with no mediation of consciousness or intelligence, the induced feeling does not involve any awareness of its external source any more than the feeling affecting another psyche contains any awareness of its effects. Such a situation is at hand in any involuntary psychic influence, such as when a pregnant woman's mood affects her fetus or unremarked "vibes" of one individual affect the feelings of another. Here there is no relationship between independent

personalities, who interact as such in awareness of their opposition. Nor is there any opposition between the psyche and the consciousness of the same individual, where these spheres of mind act upon one another as nonintegrated powers of a conflicted person.⁴³

The feeling psyche instead undergoes a passive reception of influence, both internal and external. Hegel describes this state as a “natural dreaming,” as if to suggest it were a moment of sleep.⁴⁴ Yet since feeling is the content of the waking state, this “natural dreaming” is more appropriately the felt individual totality of the psyche, which involves not just isolated sensations, but the whole natural life of the individual as it enters feeling, encompassed within a psychic field still without rational objectivity. This could become the content of dreaming proper if a conscious individual were to revert to a merely feeling psyche, full of sensations but lacking sufficient connections to sustain objectivity, and if such feelings could be had without being in a waking state.

6.4 Self-Feeling

Since feeling does not distinguish between feelings of the self and feelings of a nonself, what is felt by the psyche is its own sentient totality, without further qualification. Accordingly, feeling is self-feeling, where the psyche feels what it is: a feeling self, immediately related to itself in the neurologically registered modifications of its animal organism.

Although the psyche is the subject of all its feelings, it feels itself always in some particular feeling, located within the encompassing unity of the persisting psyche. In this respect, the psyche differentiates itself within itself whenever it has a feeling. It there takes on a particular content, a content that figures as one of its own differentiations, personal and private to the degree that whatever may be publicly manifest is only the physiological exterior of a self-relation of the psyche.⁴⁵

As the self-same subject of all its particular feelings, the psyche has universality. This universality, however, is abstract or formal insofar as the psyche’s possession of its feelings does not determine what they are. Some aspects of their content are relative to the unique body of the psyche, its unique itinerary in space and time and its unique history of interaction with its environment. Yet none of these individuating factors is sufficient to enable the identity of the psyche to determine the entire content of its feelings. Although all feelings are particular instances of the same self-feeling psyche, that commonality does not determine their other features. These other aspects remain unmediated by the shared relation to the psyche. For this reason, the unity of the psyche remains an abstract universal, which leaves its particulars undetermined in all other respects,

and every feeling is an immediate individual, with a character largely indifferent to the formal unity of the mind that feels them all. Not only does the identity of the psyche not determine what it feels, but each feeling leaves undetermined what other feelings will be felt, beyond what continuity is imposed by the body's physiology, life functions, and environment.

6.4.1 THE MODIFICATION OF FEELING THROUGH SELF-FEELING

In order for the mind to have any activity beyond the immediacy of feeling and for mental contents to be products of mind, rather than natural givens, the psyche must cease to be a wholly formal unity and transform the content it feels. The first move beyond formal self-feeling must not depend upon any other mental activity or mediation, for if it did, that other activity would precede the alleged primary step and be the proper focus of attention. Since whatever nonformal activity the psyche first engages in cannot be a product of mental activity, it will be natural in character. That is, the psyche's activity will become nonformal by nature, as a result of something it does not produce. Similarly, any transformation of the content of feeling by the act of feeling will occur by nature, rather than be mediated by any other mental process.

What alone can serve to produce this alteration is the natural occurrence of the immediately given process of self-feeling. Nothing else is yet available. That process will mediate self-feeling, which is to say that self-feeling will be mediated by a previous occurrence of self-feeling. Instead of simply being a process where a particular feeling is felt as what the psyche is, a particular feeling will be felt in a manner that reflects the psyche having already felt something. The particular feeling will therefore not just be a content in which the unity of the psyche inheres. Rather, the particular feeling will bear relation to another particular feeling that has been felt, becoming a member of the class of feelings the psyche has. The psyche therefore relates to its feeling no longer simply as an abstract universal relating to an immediate individual, but as a reflected universality, exhibiting the unity of a class whose members are not just immediate individuals, but particulars related to one another. Such particulars are determinable through quantitative judgments, which define relationships of class membership by predicating something to one, some, or all members of a class.⁴⁶

How, then, can a particular feeling exhibit its mediation by a prior feeling? The content of feeling will be hard pressed to exhibit any such mediation since feeling as such is always immediate, comprising a self-relation of the psyche in a particular modification of the neurological system, registering some state of the animal organism. That one feeling is predicated upon the prior occurrence of

another cannot be manifest if each is singular and devoid of any shared element that ties them together. If, however, the shared element is supposed to already inhabit each feeling, the first feeling will already possess that element without yet being a feeling mediated by the prior occurrence of another. Hence, the common content will not immediately exhibit the mediation it is supposed to make manifest. The mediation will instead reside in the abiding psyche that feels both feelings in succession. Yet, if that mediation is to mark their succession in the psyche it cannot just consist in the temporal order of their occurrence. That ordering will always be at hand without any feelings or self-feelings having more than a formal unity, where being felt by the same psyche in no way affects their content.

Since the mediation can be manifest in neither the content nor the mere succession of particular feelings, it will have to distinguish the manner in which the mediated feeling is felt. There must be some difference in how a feeling is felt in virtue of being felt after some other particular feeling. Given the incarnation of feeling, this altered manner of being felt will have some physiological basis, such as the alterations neurological connections undergo upon repeated stimulation,⁴⁷ as well as some physiological expression, such as conditioned responses to reiterated stimuli.⁴⁸ If, however, each feeling has its own unique character, and each is felt as a particular self-feeling, immediately given through the receptivity of feeling, the psyche will have a different manner of feeling its feelings only by acting in a way that is other to feeling in general. A different feeling will be just as immediate as any other and fail to provide any new way of feeling. Only a mode of feeling differentiated from *all* particular feeling will be irreducible to another given sensation. That is, the psyche can exhibit the mediation of past self-feeling by distancing itself from its current feeling and, in some determinate fashion, “not feeling” it. A current feeling will exhibit the mediation of past feeling by being felt in a manner where the psyche exhibits an acquired indifference, showing itself to be inured or acclimatized to what it feels, as well as to whatever repeated behavior accompanies it. Since this must happen by nature, rather than by resulting from some other mental activity, this inuring will occur automatically upon the mediated reception of feeling.

Because this distancing applies only to the mediated feeling and not to all other sensations, it does not involve a lapse into sleep. It is instead an acquired insensitivity to a particular feeling and any related particular bodily action, an insensitivity that is therefore determinate in its own right. Unlike sleep, it stands in contrast to particular feelings involving no mediation, as well as to other feelings to which the psyche has become inured.

Moreover, the feeling that is mediated by a prior feeling must bear some determinable relation to it. If all that connects them is the temporal ordering of their occurrence, their unity will have the empty formality joining feelings as

items felt by the same psyche. What is particular to the prior feeling must relate it specifically to the feeling to which the psyche now becomes inured. This will be possible if there is some family resemblance between the feelings, so that the second feeling is a *repetition*, a feeling that is mediated by a prior feeling, not just by coming after, but by being a second occurrence of the same type.

Such repetition presupposes several resemblances that are not excluded by the immediacy of feeling. One is the resemblance between successive excitations, as phenomenal self-feelings. Another is the resemblance in physiological excitations that produce or embody these excitations, including similar behaviors. Finally, these two correlative resemblances may be grounded on a resemblance between internal or external stimuli, resulting in similar excitations, or alternately, upon dissimilar stimuli that nevertheless produce similar feelings. So long as these similarities occur, the psyche is in a position to mediate its own self-feeling and overcome its rudimentary formality. All that is required is that the psyche be able, by nature, to distance itself from feelings that are repeatedly felt by becoming indifferent to them.

Since these feelings have physiological realizations, both as sensations from external stimuli and as passions precipitating behavior such as feeding or reproductive efforts, the psyche is no less inuring itself to the repeated activities with which its mediated feelings are connected.

These dual desiderata give habit its mandate as the first mental process by which the psyche alters how it feels.⁴⁹

CHAPTER 7

Habit, Expression, and the Emergence of Consciousness

Although the capability for habituation must be given by nature, habit formation entails that nature not be entirely determinative of mind, but allow for the psyche to begin molding itself through specifically psychological activity.¹

The rudimentary process of habituation, however, does not already involve the features that inform habit when it proceeds within consciousness and/or intelligence. In that more developed mental context, habit can be characterized in the terms that Aristotle, for example, employs in analyzing how habit is the midwife of virtue, enabling conduct to be performed for its own sake once the agent becomes indifferent to the satisfaction of desire that must first provide an external incentive to motivate the action.² Although such habituation presupposes the psyche's distancing from its own feeling, it also assumes consciousness of objects and self-consciousness, together with the practical engagements with objectivity that these make possible. Desire relates to objects of consciousness as factors through which the self is aware of obtaining its own satisfaction. Hence, any habituation that involves repetition of action in pursuit of desire satisfaction involves both consciousness and self-consciousness.³ Yet, before this can take place, a more rudimentary habit formation is needed.

7.1 Habit

To figure as a development of the psyche, habit must proceed without any awareness of objects or of desires for them. All that can here enter into habituation can be the feeling self, the feelings it has, and its relation to them. These feelings can include drives that precipitate irritable behavior. Yet, even these need not yet be determined as desires for objects distinguished from the self.⁴ All such subsequent features of mental life must be held at bay precisely because

they themselves cannot occur without the psyche already possessing its own habit formation. As will become evident, unless the psyche can undergo habituation, mind cannot disengage itself from mental content and relate itself to it as a subject opposed to objects. Accordingly, what is here at stake is habituation that can occur in infants, subrational animals, and impaired adults, as well as in rational persons whose repeated choices can foster habit, thanks to this unconscious process of the psyche.

7.1.1 THE ABIDING FORMALITY OF HABIT

Through habit, the self of the psyche appears in the life of feeling in distinction from particular feelings that are its components. Instead of remaining merely the self-related container of its sentient being, where every feeling is equally immediate, the psyche here exhibits a more differentiated unity through specific insensitivities it acquires on the basis of its own self-feeling. Every time the psyche distances itself from repeated feelings, it equally transforms itself. This transformation is at once mental and physiological, for the detached insensitivities, or habits, have a corporeal being, realized both in acquired neurological transformations and in acquired physiological modes of behavior.

These manifestations give the self of the psyche its own differentiated being in the mental-physiological reality of self-feeling. There they comprise a second nature, as Hegel aptly puts it,⁵ insofar as they are acquired patterns of feeling that now function as given endowments of the psyche. They do not render the psyche an ego, standing distinguished from its own body and the world.⁶ Habits instead still dwell within the sentient-physiological unity of the psyche.

There, habit comprises an acquired disposition, universal in character insofar as it issues from recurring feelings and expresses the commonality that makes these repetitions.⁷ Habit is a universal disposition simply by comprising the detached insensitivity to feeling and associated behavior that is conditioned by prior psychological occurrences of similar sensations, drives, and actions. Instead of comprising a singular way of having a single feeling, habit comprises an acquired common manner of repeatedly having similar sensations and behaviors. Furthermore, these universal modes of mental comportment are produced by the psyche itself, insofar as they arise in virtue of the psyche repeatedly feeling similar sensations and drives. Through habit, the psyche ceases to be simply a container of sentiments by which it is contingently affected, now by one particular feeling and next by something else. Instead, habit gives the psyche an identity residing in universal patterns of altered sensitivity produced by the psyche itself.⁸

Of course, the tendency to form habits is itself a regularity of the psyche given by nature. Yet, this psychological regularity is a generalizing tendency,⁹

rendering the psyche a self-universalizing subject, producing an ever-more regularized affectivity and irritability. The acquired generality remains formal, because what regularities get acquired are contingent upon recurrent external circumstances.

Accordingly, as much as habit frees the psyche from immersion in its feelings, it makes the psyche a slave to its acquired dispositions.¹⁰ These are still given to the psyche by a mechanism possessed by nature and automatically activated by successions of feelings that are equally given to the mind. Thus, as much as habit is a *second* nature produced by the activity of the psyche, habit remains a *nature* for the psyche, given to it as a fixed endowment.¹¹ In this respect, habit is like instinct, except that habit's recurrent responses to recurrent stimuli have to be acquired through repetitive feelings, unlike recurrent instinctive reactions that are innate.¹²

Consequently, although habit enables the unity of the psyche to inform its own being, habit still has a formality in that what feelings and behavior figure in habit formation are given independently of the process of habituation. The psyche does not determine which habits it acquires. Their identity remains externally dictated by what feelings and their physiological realizations happen to get repeated. Conversely, habit formation retains the same character no matter what habit is acquired. The process of habituation is not itself mediated by any feelings, but given by nature to the psyche.

How the psyche relates to the feelings to which it becomes habituated is illusive because of what must be excluded. To begin with, although what get mediated are feelings, the psyche cannot have them simply as sentient. In that case, habit would be indistinguishable from feeling per se, which occurs in virtue of being felt by the psyche. Nor can the psyche's distancing from its recurrent sensations be a conscious awareness of an object, distinct from the ego. The habituated feelings remain part of the psyche's own life, but the psyche does not allow itself to be absorbed in them. The psyche possesses them and navigates through them, but without feeling that occupation.¹³ This distancing has the positive implication that the psyche is freed from immediate immersion in its self-feeling, at least in those feelings and accompanying behaviors that are mediated by what has been felt and performed before. Although the psyche does not thereby dispose of an autonomous power to direct its attention to other contents, its escape from its own feeling sets the stage for all those activities of mind that require attending to something other than what is immediately felt and done.¹⁴ If this possibility were absent, feeling would have a stranglehold upon mind,¹⁵ confining mental life to sentiment and precluding consciousness and intelligence. The same can be said of the actions to which the psyche acclimatizes itself. Only once these become habitual can mind occupy itself with other, nonroutine affairs.¹⁶

To the degree that the psyche is a prerequisite of conscious intelligence and that habit enables the feeling self to free mind of immersion in feeling and the behavior it accompanies, habit is indispensable for all intellectual life.¹⁷ Thinking may be the most self-contained of all activities, but even thought requires habit for mind to sequester itself from its sensations and drives, exercise a freedom of attention, and linger in the realm of conceptual discourse.¹⁸

7.1.2 THE FORMS OF HABIT

Although habit is formal in character, its mechanism has several forms reflecting the differences in source and realization of the recurrent feelings from which it arises.

With respect to external sensory stimuli, habit takes the form of an inuring to repeated outer sensations. These feelings are registered, but the self-feeling of the psyche disengages itself from these sensations without yet relating to them as determinations of objects. To treat them as objective requires giving them something more—a unity independent of the psyche that can be contrasted to that of the mind. Without that unity, sensations remain mental modifications with only subjective connection. Nonetheless, unless habit formation inures the psyche to its external sensations, it cannot begin the process of disengagement that culminates in consciousness of sensations as something objective. At the current preconscious stage, where the psyche still communes with nothing but its own determinations, self-feeling becomes simply indifferent to recurrent external sensations, such as persistent cold or heat, droning sound, or ambient light. The psyche does not become entirely insensitive, nor does it lapse into the complete inattention of sleep. Instead the psyche distances itself just from repeated feelings that remain accessible, but about which the psyche is no longer bothered.¹⁹ Because the psyche still feels sensations as they arise before or without repetition, the indifference to recurrent feelings has positive significance in that the psyche feels itself in distinction from the repeated sensations it increasingly ignores. What the psyche feels and feels itself to be still retains the immediacy of sensation, but its own sentient life now has content that can begin to be differentiated from the sensations to which it is accustomed.

This incipient diremption also applies to feelings that are internal in origin. Here habit formation involves the psyche becoming accustomed to its own urges and impulses, whose repeated expression and satisfaction renders the psyche indifferent to them. Whereas the disengagement from external sensations prepares the way for objective consciousness, the psyche's deadening to its own impulses sets the stage for practical intelligence, where mind resists its urges in favor of rational behavior.²⁰ That move involves much more than habit since it presumes

both self-consciousness and the rational formulation of intentions. Without self-consciousness, mind could not be aware of any ends of its own, nor set these in opposition to the psyche's urges. By contrast, the mere indifference to impulse and its satisfaction is only an acquired withdrawal from immediate immersion in urges. Any positive alternative to given impulses must depend upon further mental processes. Nevertheless, because the psyche still feels what it has not become habituated to, it is already occupied with self-feelings that are distinguishable from the repeated impulses to which it becomes impassive. In this rudimentary sense, the psyche already has a mental content with which it can ignore its recurring urges.

Because feeling is connected to physiological alterations as well as bodily movements that may or may not involve specific interactions with the environment, habit formation involves not just indifference to sensations and urges, but the acquisition of a general, recurring behavior to which the psyche becomes detached. Again, the detachment does not go so far as a conscious apprehension of something opposed to awareness. It instead involves repeated bodily motions that remain part of the life of the embodied psyche, but to which feeling is now deadened. This puts the psyche in the position of engaging in these recurrent physical operations without having to occupy its mind with them. They have thereby become the expressions of new dispositions as unattended as they themselves. In this respect, the psyche's habitual behavior is unconscious, proceeding with neither an awareness of any subject-object dichotomy nor with ordinary sensation of the recurrent performances. These recurrent engagements take on the shape of mechanical behavior, from which the psyche has withdrawn.²¹ Acquired skills and other practical habits presuppose this indifference, where the acclimatization to repeated behavior permits the following of a rule without attention to the particulars of the activity.²² On this basis new skills can be acquired without having to attend to previously acquired skills on which they depend. This enables a cumulative hierarchy of skills to emerge, with the "higher" ones resting upon the automatic, unconscious performance of the "lower." So, for example, one acquires habitual skill at walking after becoming habituated to standing, just as one cannot learn to speak without first acquiring the habits of discriminating and articulating sounds.²³

The same process applies to the acquisition of mental skills, whose habitual repetition renders them automatic operations that need not distract from further mental engagements resting upon them. Such habituation will underlie the development of conscious perception and intelligence, with the habitual discrimination and coordination of sensations from different sensory modalities and the repetitive exercise of imagination and linguistic representation providing a complex of mental skills enabling mind to function without disabling distraction.²⁴ Although these mental activities need not involve express bodily movements, they

have their own neurophysiological realizations, whose exertions can be felt. The more habitual these mental operations become, the less these feelings intrude upon the attention of the psyche.

Since specific feelings still retain a specific manner of corporeity, the habituation to certain behaviors establishes a divide in the psyche's relation to its bodily nature, foreshadowing the more complete diremption that will render mind conscious of its body as an object. To become conscious of its body as an object, mind must face its body as something with a unity of its own, distinct from that of consciousness. What habit provides is a demarcation of a lesser degree that does not yet comprise a subject-object dichotomy. By detaching feeling from repeated activities, habit gives the psyche a twofold relation to its body. On the one hand, the psyche remains in immediate identity with its body in those feelings that are directly connected to physiological behavior to which the psyche is not yet inured. Lacking the training of habituation, these organic functions are pervaded indiscriminately by the psyche, which penetrates everything it first feels with equal immersion.²⁵ On the other hand, the psyche detaches its feeling self from the bodily process of habitual behavior, which now is mediated by the prior receptions of the mind. In so doing, the psyche submits behavior to rule, consisting in the connection to other instances of the same type of activity, a connection secured through the indifference the psyche shows to them all.

7.1.3 HABIT AND MEMORY

Habit and memory are intimately connected.²⁶ Both are psychological mechanisms where mind relates to its own content in an automatic manner, habit arising from the repetition of similar feelings and exertions, full-fledged memory arising from the repetition of similar intuitions and representations.²⁷ Analogously, as we shall see, consciousness cannot engage in perception or understanding without connecting current and past sensations. In each case, mind exhibits an automatic capacity to take abiding possession of mental contents, thereby altering itself in function of what it has felt, sensed, or intuited.

Habit goes hand in hand with the most rudimentary form of memory—that of inwardized feeling. By acquiring habits, the psyche takes enduring custody of its feelings and transforms itself, giving itself an abiding character in function of what it has repeatedly felt. Thereby the psyche acquires a repository of prior feelings that are as much a part of mind's being as the repository of prior sensations and prior intuitions that consciousness and intelligence will internalize through their own characteristic self-activities. The trove of mental contents that now mold the psyche involve feelings both internally and externally generated, but they remain feelings that have yet to be transformed into sensations of objects.

The “memory” of the psyche is still purely subjective, as well as prelinguistic. Through habit, the psyche has a preconscious, nondiscursive remembrance of the feelings it has felt, together with the acquired motor dispositions that accompany them. Habits present past feelings in their imprint upon current feeling and current behavior, without the deliberate recall that becomes possible when mind adds consciousness and intelligence to its psyche. In the absence of those further mental developments, the traces of recurrent feelings mark the psyche with a more rudimentary familiarity in which animals and preverbal children can share. They do so not by recollecting images, but by undergoing generalized feelings and movements through which habit gives the psyche’s past a present activation.²⁸ Instead of imagining the past, habit brings the psyche to feel and act the past as it informs the present.²⁹ In this elementary recognition, the psyche registers felt similarities not by representing their generality, but by expressing their recurrence in the habituated manner with which the individual feels and moves. In this way habit comprises a “bodily memory”³⁰ imprinting the psyche with sensori-motor dispositions cultivated by its own activity.

Needless to say, these acquired dispositions have a neurophysiological basis, involving some process in which repeated neurological transmissions of similar excitations affect future transmissions, as well as connected muscular development, all in function of the self-serving ends of the animal organism. Peirce suggests that the central neurophysiological principle of habit is that a nerve cell, once discharging itself along certain paths, will discharge itself the next time it is excited more likely along some or all of those same paths, provided the interval between excitations is not too great.³¹ As Peirce observes, this is not a purely mechanical outcome, for unless some element of chance remains in cell discharges, permitting habit to be disobeyed, there can be no possibility of a questioning intelligence arising from these emergent tendencies.³² Whatever habit’s physiology may be, to comprehend the mental significance of any resulting neurological alterations, one must refer them to their integration within the totality of the mind, as it animates the entire living individual.³³

7.1.4 THE OUTCOME OF HABIT

The psyche first becomes able to express feeling in some corporeal modification by virtue of habit. While feeling always is immediately embodied, habitual behavior places the psyche in a detached, external relation to its animated body, whose repeated sensations, drives, and movements engender a patterned second nature from which the psyche withdraws its self-feeling. This disengagement allows the psyche to *produce* an incarnation of its feeling, rather than simply *have* some embodiment to which it is directly conjoined. Thanks to habit, the psyche

can relate to a physiological reality of itself from which its awareness is detached and then infuse it with feeling, to new corporeal effect. On that basis, some aspect of the body can explicitly *express* the feeling of the psyche, which for its part can now take this corporeal expression under its wing as a subordinate feature, rendered an instrument of the psyche's feeling self.³⁴ Feeling thereby acquires a reality, albeit with its own immediate physiological existence, that opposes the body as something in which it can gain further expression. That further expression is now mediated by the prior mental-physiological unity of the psyche that is its ground. Accordingly, the psyche can begin to *appear* in the body, whose modifications can now *signal* the psyche's own mental content.

In this way, the identity of psyche and body takes on a new character. Instead of being immediately given in the conjoined unity of sensations and drives with their physiological underpinning, the identity is here produced by the psyche's successful expression of its feeling in its body. It possesses immediacy as a psycho-physiological reality that has being and thereby is felt by the psyche. At the same time, however, its corporeal reality is a shape in which it both feels itself and makes itself felt.³⁵

7.2 The Actualization of the Psyche in Expression

To gain actuality in the strict logical sense of being the ground of its appearance,³⁶ the psyche's own feeling must determine how its body manifests itself. This does not involve a conscious formation where the body figures as an object of a subject's manipulation. Instead of relating to its body as an independent entity from which it is disengaged as a conscious awareness, the psyche feels only itself and in doing so, determines the body as its own manifestation. To achieve this, the psyche must *produce* the unity of its feeling and its physical appearance instead of simply *having* feelings that are conjoined with physiological modifications. Feelings that, as such, already have corporeal reality, must engender a further bodily alteration that can comprise their expression, an expression that is no less felt.

This expression cannot depend upon some intervening modification of the body without begging the question. If the psyche needs some other manipulation of the body to effect the expression of feeling, that manipulation would either be an immediately operative expression of feeling or a manipulation in need of some prior manipulation, engendering a regress without end. Consequently, the expression of feeling happens without any further ground as the direct realization of feeling by a psyche that has withdrawn through habit from its embodiment.

Preconscious, prelinguistic emotive gesture comprises this further bodily alteration determined by rather than coevally conjoined with feeling. Whereas language will allow conscious intelligence to gain expression, emotive gesture allows the feeling self to make itself manifest as the determining ground of at least some aspect of the psyche's body.

Such emotive expression must be distinguished from conventional or artificial gestures that owe their origin to deliberate attempts at communication or consciously embraced customs. Communication presupposes consciousness of oneself, of an objective world, and of others within it,³⁷ whereas following custom assumes consciousness of those conventions, as well as the conscious ability to formulate and implement the purpose to conform to them. Accordingly, independently of conscious intelligence, the psyche can only express itself in nonconventional, nonartificial gestures. That these expressions of feeling are involuntary does not mandate that they are innate or universal, as Darwin suggests.³⁸ Given the natural individuality of the psyche, the influence of its unique itinerary in space and time, the individual history of its habituation, and the resulting contingency of feeling, what involuntary gestures arise need not be duplicated by anyone else, nor be dictated by birth. Some gestures may reflect species specific commonalities, but others may be unique to individuals. Whatever the case, their expression of the feeling of the psyche signifies only that their physiological gesture is produced by an antecedent sensation of the psyche, which is itself both mental and physical. One must employ conscious intelligence to recognize this, but not to be what is so recognized.

The limitations of the expression of feeling are implicit in its origination. As we have seen, habit sets the stage for involuntary gesture by enabling the psyche to withdraw from its immediate immersion in feeling and its physiological reality. On this basis, the psyche can make its first positive impact upon its own existence by molding its body in accord with its feeling. Feeling still remains particular and contingently given, although the regularities of habit set the psyche free to connect feeling with bodily features in which it is no longer immediately immersed. The detachment in habituation allows for a reunification that allows feeling to appear in physiognomy, but what feelings so appear is just as variable as what content habits acquire. Involuntary expression may render the body an instrument of the psyche, but it retains the formality of habit, leaving contingent both what gets signaled as well as how it appears. Moreover, because what serves to express feeling depends upon an antecedent habituation that detaches feeling from its original embodiment, when that same sort of gesture occurs, it can manifest some feelings while becoming inured to others that were part of its original performance.³⁹

This appearance of feeling cannot immediately comprise an intentional gesture, issuing from a prior desire and a corresponding representation of desire

fulfillment. Any such intended gesture involves consciously guided behavior presupposing conscious and self-conscious awareness. The preconscious gesture of the psyche, by contrast, occurs without any subject-object dichotomies. What gesture here expresses is feeling, not desire. The gesture is emotive, arising not from any conscious resolve, but simply from the having of a feeling, which itself has no significance as a determination of an object. The psyche still feels only itself and gives expression to that self-relation, even when the feeling is not just a sensation but a drive impelling behavior.

As the involuntary embodiment of inner feeling, preconscious gesture can be had by any organism with a psyche: subrational animals, prerational infants, mentally impaired adults, and fully competent intelligent agents. Although empirical observation may always leave suspect the connection between external gestures and inner feelings, the preconscious and preintelligent character of involuntary embodiment of feeling gives good reason to follow Darwin in looking for such expressions in prerational animals as well as humans. This is all the more pertinent to the degree that preconscious and preintelligent behavior is more reliably encountered on its own by avoiding rationally competent subjects, whose gestures are in part informed by conscious intelligence. Accordingly, when Darwin seeks to investigate the involuntary expression of emotion in humans, he focuses his investigation by seeking observable communalities in the behavior of animals, infants, and the insane.⁴⁰ They provide relatively untrammelled evidence for a mental/physiological reality given independently of conscious intelligence.⁴¹

Similarly, Darwin locates these expressions in inheritable behavior.⁴² Their natural, rather than acquired character, is confirmed by examples of blind, deaf, and dumb individuals, who allegedly are shut off from convention, as well as from examples straddling the widest cultural divides.⁴³ Such cases may facilitate recognition of expression by others,⁴⁴ insofar as what is manifest in one individual is experienced by every other.⁴⁵ Nonetheless, the preconscious, involuntary character of the expression of feeling can, as we have seen, reflect the unique circumstances of the individual psyche, making interpretation difficult for those unfamiliar with that individual's history.

Insofar as habit makes possible the detachment enabling feelings to express themselves in gesture, such expressions are themselves susceptible to habituation. The repetition of the type of feeling first expressed will then trigger a recurrence of similar gestures, irrespective of the wider context.⁴⁶ This detachment sets the stage for gestures becoming employed in other ways. What allow for such employment are the further dimensions of mind and the other mental contents they make possible.

Since conscious intelligence includes the psyche and its corporeity of feeling, there can be freely occurring embodiments of feeling that are conjoined to

conscious representations and linguistic meaning. These allow the gestures of a rational agent to be distinct from those of an infant or a dumb animal, even when the gestures express merely emotions.⁴⁷ Moreover, whereas voluntary gestures can become mechanical through habit, involuntary expressions can be consciously and freely invoked, as when laughter or sighing is intentionally produced.⁴⁸ This permits treating gesture in two different places, but not, as Hegel suggests, when addressing the purely feeling psyche and then the “actual” psyche, but rather in respect to the actual psyche and then in connection with conscious intelligence.⁴⁹ Because the actual psyche does not involve conscious awareness, voluntary gestures fall outside its domain into that of conscious intelligence.

7.2.1 TRANSITION TO CONSCIOUSNESS

The molding of the psyche’s body and feeling through habit and expression sets the stage for the attainment of objective consciousness. To become conscious, mind must distinguish subject and object. Without that distinction, mind communes only with itself, remaining just a psyche that feels its own feeling. To confront an object as a conscious subject, mind must relate to itself not just as at one with its embodied manifold, but as opposed to it, determined partly in the shape of its own body and partly as an external world.⁵⁰ Instead of feeling the content of the psychic field as determinations of its mental/physiological unity, mind must disengage itself from them, expelling them as determinations of something other. In so doing, conscious mind equally unites with itself in what it differentiates, having awareness of its objects through the mental content of its own disengaged self.

To achieve this dual disengagement, the psyche must transform its identity with its body into an identity brought about by mind.⁵¹ Only then can mind relate *to* that identity, rather than be immersed in it. The psyche must thus take possession of its body by making it into a pliant, skillful instrument in which the psyche relates to itself, treating the body as a subordinate accident of its substance, which is the psyche pervading it. Thereby the living body functions as the middle term by which the mind communes with the external world,⁵² even if, as psyche, it does not yet distinguish a world from its own mental field. Whereas the psyche communes merely with itself through the mental-physical modifications of its natural being, habit and expression introduce aspects of indifference and externality that enable these same modifications to relate mind to an objectivity distinguishable from itself.

To pervade the body in a determinate fashion, the psyche must undergo the training of habituation, which brings into feeling and bodily activity a universal

mode or rule, a pattern of felt behavior from which mind's attention is equally disengaged. This begins to give the body a universal unity of its own to which mind can relate. This relation takes determinate shape in emotive gesture, where the psyche gains expression in subordinated embodiments that reflect rather than constitute its feeling. Although involuntary gesture still expresses only the feeling of the psyche, in that expression gesture retains an otherness to what it signals.

When the psyche thereby achieves actuality, grounding its corporeal appearance, it distinguishes itself from its immediate being, where feeling and physiology are coevally intertwined. The psyche now faces its corporeal reality as something subservient to its expression. With self-feeling turned into habit, providing the detachment by which the body can become an appearance of inner sensation, the actual psyche has rendered its natural qualities factors mediated by its own unity, *making* this externality something in which the psyche relates to itself.⁵³ Unlike immediate sensation, the feeling expressed by the body is distinguished from its embodiment as something inwardized, possessing a determinate mental existence that comprises the outwardly hidden essence of the ensouled body.

This development brings mind to the threshold of consciousness. The psyche stands on the verge of generating a mental process where the mind has an abstractly universal unity of its own. This unity is the psyche's own insofar it is something to which mind stands in relation, as something for it in opposition to the sentient body serving its expression.⁵⁴ This allows mind to relate to its own mental content as something disengaged from its sentient embodiment.

The psyche's unity is abstractly universal insofar as the subsumption of all feeling into self-feeling renders each sensation a possession of the self-same psyche, but otherwise leaves undetermined what content each feeling has. Because the unity of the psyche encompasses all its feelings without determining their individual character, its universality is abstract, failing to concretely penetrate what it unites.⁵⁵ With habit and the corporeal expression of feeling, the psyche relates to feelings that are already mediated by the unity of the psyche, but mediated in an abstract manner that only suspends them rather than engendering new content. Habitual feelings and their embodiments are related to others through repetition, exhibiting in themselves an abstractly universal unity, where the repetition connects each instance without determining what individuates it from its counterparts, and where the repetition can involve any feelings, drives, and actions that happen to share a family resemblance with prior engagements. By expressing its feelings in involuntary gesture, the psyche externalizes its own unity as something produced by its own self-feeling.

To become an ego aware of an objectivity from which it is disengaged, mind must treat its feeling not as something to which it is merely habituated nor as just expressed in its body. Instead, mind must exclude from itself the totality of

its given, natural content as an object, an external world, in which, at the same time, it is immediately related to itself. In this way, mental content operates in a dual fashion, as the determination of an objectivity, with a unity of its own, and as determinations of mind, such that in distinguishing itself from objectivity, mind is equally relating to itself.⁵⁶ Both are needed, for unless the determinations of objectivity are determinations *of* mind, the subject cannot be conscious of them.⁵⁷

What plays a key role in the move from psyche to consciousness is the limitation in gesture's pervasion of the body by feeling. As Hegel points out, the actual psyche's expression of feeling in the body is only partial. Bearing, facial configuration, and the like may be molded into instruments of self-feeling, but the body continues to involve organic processes that operate independently of emotive expression.⁵⁸ The psyche pervades those corporeal features that express feeling, but the other aspects of the body remain external to its self-expression.

Once the psyche feels this limitation, it feels itself while expelling its non-expressive corporeity as something external to its self-sentient unity. Hegel maintains that the psyche, by performing this reflection into self, becomes "I," the ego of consciousness, giving itself the form of essence, consummating its liberation from the form of mere being, where mind was immediately immersed in its natural determinations.⁵⁹

Yet can this self-reflection suffice to engender the polarization of consciousness from the psyche's unopposed sentience? Habituation may extricate mind from immersion in feeling and behavior, affording mind a power of attention, making even pain disappear when mind focuses elsewhere. Thereby, as Popper suggests, attention comes close to consciousness, detaching mind from its own field of embodied feeling.⁶⁰

The psyche's indifference to its habituated sensations, drives, and behavior may give them a separation from mind's awareness akin to the mind-independence constitutively ascribable to objectivity. Yet by being removed from mind's attention, the second nature of habit can hardly provide the content that mind knows to be objective. Whatever is to count as objective must appear to mind, even if distinguished from mind's own unity. Does expression make manifest to mind the indifference and limit of its content so as to enable mind to confront an independently unified domain as a disengaged subject?

To confront objectivity as a conscious subject, mind's own content must figure as the appearance of something given to it. This independent other counts as the essence, whose manifestation mental content provides. The actual psyche already embodied the category of essence to the extent that gesture rendered at least some aspect of the body an appearance of the feeling self, which therein related to itself as the ground of this appearance. If consciousness is to exhibit the relation of appearance and essence, it must involve something more than

this, for what appears to consciousness is not just mind's inward feeling, but an independent world that is sensed.

Different options present themselves. On the one hand, objectivity *appears* to consciousness, which might lead one, following Kant, to ascribe essence to a reclusive thing-in-itself beyond the veil of appearance. On the other hand, consciousness, in being aware of an object, reflects itself insofar as the determination of the object lies in mental contents that consciousness relates to both as itself and as something other. The feeling self still relates itself to its own body when distinguishing gestures from physiological processes indifferent to its expression. By contrast, consciousness treats the externality in which it is reflected back into itself as something genuinely other. This is the case for determinations of the psyche's own body as well as for determinations of the rest of the world. Consciousness relates to both types as objects external to the subjective field of consciousness to which they equally belong.

The transformation of the psyche into the "I" of conscious awareness is not a matter of acquiring self-relation and selfhood. The psyche already possesses both as the self-feeling self. In this capacity the psyche has universality as well by being the encompassing unity of all its feelings. What makes the self-relation and selfhood of mind constitutive of consciousness is that the self-relation of the self be a relation of universal to universal. In other words, the feeling self becomes the "I" when its universal unity of all its mental determinations stands in relation to an other that is equally universal,⁶¹ namely a content that has its own encompassing unity in contrast to that of the mind. Only then can mind as subject confront a self-subsisting objectivity.

The psyche cannot attain this polarized self-related universality because the body to which it relates is always pervaded by mind and never set free with a unity of its own. As Hegel observes, whereas the awakening of the psyche is confined to mere sensation of single things, the awakening of the "I" of consciousness has the psyche's own unity as that to which it relates itself.⁶² The ego disengages itself from the entirety of what it senses to the degree that what it senses can stand on its own by exhibiting the complete unity that the psyche imposed upon its feelings. This is achieved when the psyche relates to the living body which it has relegated to its expression as both confronting it with a reflection of its own mental unity and a totality distinct from it.

This move, whereby the psyche engenders consciousness once mind relates to the psyche, foreshadows the move from consciousness to intelligence, where the "I" becomes the intellect once consciousness becomes its object, enabling mind to apprehend its determinations as both mental and objective. In retrospect, the process of the psyche has reached the threshold of consciousness by traversing the following itinerary:

First, the psyche is immersed in sensation, which it then transforms into a mediated element of the feeling self, which has its feelings only insofar as it feels them, and thereby, itself.

Then, through habituation, the psyche makes sensation into something universal and inwardized, incorporating a relation to other prior feelings of the same type in virtue of the detached way in which it is felt by the accustomed mind. Habit thereby fills the initially empty space of mind's inwardness with a content reflecting its universality. Instead of just feeling immediately given sensations, mind acquires patterns of sensitivity, drive, and motility, where habituation engenders a second nature of inured dispositions to similar sensations, acclimated urges that possess family resemblance to one another, and rotely repeatable skills.

This development becomes complemented by the psyche's expression of feeling in its body. By acquiring habits, the psyche has placed the universal contents of feeling within itself, molding its own sensibility and behavior in terms of the repeated sensations it has felt, which allows mind to withdraw its attention from modifications that now have a patterned unity of their own. Through involuntary gesture, the psyche has made its body into the appearance of its underlying self. In so doing, the psyche has given an inner, essential being to itself, which the self now beholds in what is no less other to it.⁶³ Although the expressive body is the psyche's own, the distinction between its appearance and essence brings mind to be aware of itself in distinction from the immediate being of its sentient body. Once mind registers these bifurcations, it relates to itself confronting a sensuous manifold, effecting the disengagement by which subject and object stand opposed in conscious awareness.

7.3 The Emergence of Consciousness

The transition from the psyche to consciousness comprises a twofold development involving a transformation in, on the one hand, the content of feeling, and, on the other, the subject of feeling.

The content of the psyche's mental field must become organized into something other to mind, which minimally occurs when the manifold of feeling is so united as to be distinct from the unity of the psyche without otherwise modifying that manifold.⁶⁴ This abstractly universal unification is the least transformation required to give the content of feeling an independence with which it can face mind as something standing on its own. An abstract universal inheres in particulars whose individuating content is given independently of what they share in common. It provides the most limited, least determinative form of universality by which particulars can be united. To become a domain

that is a nonmind, feeling must no longer have its unity just in the psyche, as the encompassing self that joins transient sensations into a psychic field. In order to become a nonsubjective, objective realm, the contents of feeling must acquire a unity distinct from that of the psyche. The most basic such unity is provided when something common inheres in feelings themselves, something by which feelings can be intrinsically connected apart from the psyche that feels them.

On the other hand, the psyche must attain a unity of its own that is separable from the given material of its feelings. In order to become a subject opposing an object, mind must extricate itself from the content of sensation and have a free-standing unity. This extrication is correlative to the independent ordering of the sensible manifold. Once feelings themselves obtain unification in an abstract universal that inheres in them, mind is effectively cast out of its felt content, which it now senses as something from which it is disengaged. It then comprises, on its own account, the abstract subject of these sensations, which it now apprehends to have a self-subsisting unity. Mind is their abstract subject in that its extricated unity does not determine the individuated content of what it senses and is otherwise free of any further content of its own. Hegel can thus duly observe that only when a universal comes to be for the universality of the psyche does the psyche develop into an "I" that exists for itself, freed in an abstract manner from the immediate material of its own content, which is itself thereby enabled to exist apart from the "I."⁶⁵ The liberation of the psyche from its own immediate content is abstract because the unity of the "I" is still related to the given contents of feeling. The "I" may have extricated itself from them, but it has no particular content other than being what relates to sensations, whose acquisition of an abstract universality of their own enables them to stand as an opposing domain of the nonego. Through this dual transformation, mind becomes aware of an other, an objectivity that it faces as a disengaged ego, conscious of a nonego through the same contents that previously figured only as the psyche's own feelings.

The resulting confrontation of one unity to another, of one universal subjective standpoint to an opposing universal objective domain, does not involve the transformation of the psyche's "pre-objective *feeling* subjectivity" into an "objective *thinking* subjectivity."⁶⁶ If that were so, consciousness would have to be discursive from the outset, never just sensing a tangible world, but always already having to conceptualize it. All the developments making linguistic intelligence possible would need to be in place, even though these presuppose minds being conscious of themselves, of the designations of other minds, and of a common universe. The opposition of consciousness, however, minimally requires only a unification of the content of feeling that can stand independent of the subjective unity of mind. For this reason, habit and the actualization of the psyche can contribute to a "deduction" of consciousness. By enabling mind to relate

to its own mental content as something from which it has extricated itself as an abstract subject, habit and expression let that content be a limit to mind, indifferent to its awareness, thereby comprising an object-like “nonego.” Because this bifurcation emerges solely on the basis of the psyche, without need of thought, consciousness can be possessed by dumb animals and prelinguistic children alike, removing a key obstacle to comprehending how linguistic intelligence arises.

The investigation of consciousness must now address how this new opposition incorporates and transfigures all the concrete living reality that the psyche contains.

SECTION 2

Consciousness

CHAPTER 8

The Elementary Shapes of Consciousness

Consciousness is a product of the psyche's embodied development. Conscious awareness is neither an immediately given standpoint underlying all mental life nor a self-positing subject-object awareness that somehow emerges from nowhere. Because consciousness is not mentally primordial, all prospects for knowing and action need not be defined by its objectivity-opposing awareness and nonobjective subjectivity. Instead, overcoming the opposition of consciousness in theory and practice may be just as possible as the awakening of the psyche to a confrontation with objectivity. Moreover, just as reason need not be limited by experience, neither need consciousness be bound to discursive rationality.

8.1 Consciousness as a Product of the Psyche

These possibilities beckon insofar as conscious awareness depends upon the psyche for both its constitutive poles: the self-related mental centrality of the conscious self and the sentient content to which the mind relates as something other, from which it has disengaged itself. In becoming conscious, mind does treat its psychic field in a new manner, but this does not abolish the psyche any more than it ends the life of the animal organism in its biosphere. These remain inseparable fixtures of conscious awareness, ever underlying its experience.

Consciousness is accordingly accompanied by all the natural qualities, self-feeling, habituation, and involuntary bodily expression that comprise the reality of the psyche. Consciousness may not be immediately aware of all these aspects of its own psyche, but conscious awareness will ineluctably reflect the immersion of mind in an individual animal organism, with a unique itinerary through and interaction with its world. The objective features of this active immersion cannot be discriminated by the psyche owing to its constitutive inability to supersede feeling

by distinguishing subject and object. Consciousness, by contrast, can become aware of its own concretely determined reality, but only by further transforming the sentient content immediately given to it by the psyche.

At the outset of conscious awareness, all that is at hand is the totality of feeling felt by the psyche, but now distinguished as a totality from which mind is disengaged and in which mind no less relates to itself. Both aspects of disengagement and self-relation are coeval and necessary to consciousness. Unless consciousness relates to its own totality of feeling while distinguishing its content from itself, that totality does not fall within conscious awareness. As Kant duly observed, if consciousness is unaware of the “sensuous manifold” as being its own determination, that content is not *for* awareness and cannot be *consciously* sensed.¹ Alternately, unless consciousness distinguishes the totality of feeling from itself, it cannot relate to itself as a disengaged ego, that is, a conscious subject, aware of a nonego to which it is opposed. To be conscious, mind must comprise this reflection, which encounters its own determinations in the mental content from which it equally extricates itself, apprehending an independent objectivity that appears through mind’s own sensation.²

Accordingly, the conscious ego does not first apprehend itself and then discover an object confronting it. Rather, the unity of consciousness is first constituted by the opposition of disengaged self to its other, mind-independent objectivity. Mind must engage both poles to be able to relate to itself as the subject of conscious experience.³ Although objectivity, as mind-independent, counts as something whose being for consciousness is contingent, mind cannot be conscious without confronting an object.⁴

Moreover, the opposition of an individual subject and given objectivity depends upon mind being embodied in the world, as an individual involved in a very practical interaction with the encompassing biosphere. The subject-object opposition is thus not merely theoretical, but equally involves a practical engagement between a conscious individual and the world it inhabits.⁵ That practical relationship may not be something of which consciousness is, or indeed, can be immediately aware, but it underlies every shape that consciousness may take. Insofar as consciousness always belongs to an animate individual whose living engagement it informs, one’s consciousness “does not *accompany* but is *integrated with*” one’s bodily activity, at least partly determining the embodied person it itself comprises.⁶

Because consciousness has its constitutive subject-object opposition by reflectively relating to the same sentient content with which the psyche self-communes, the preconscious psyche is in principle accessible to consciousness. Hence, Hegel is right to maintain that mind is conscious insofar as the psyche is for it.⁷ Similarly, Searle is correct to claim that the very concept of an unconscious mental state entails that it be something of which mind can be conscious.⁸

Accordingly, pace Searle, the unconscious mind is potentially conscious. Mind realizes that potential through the modifications the psyche undergoes through its own mental activity, modifications that thereby comprise the enabling psychological conditions of consciousness.

Once again, this does not mean that consciousness eliminates the psyche by relating to feeling as the sensation of an objective reality from which mind is disengaged. The psyche still persists as an accompanying unconscious backdrop, whether in the form of immediate self-feeling, habituation, or involuntary expressions of feeling.⁹ Indeed, the very continuity of consciousness depends upon the abiding presence of unconscious mental states, including the habitual dispositions and memories that enable mind to sustain the enduring identity of consciousness.¹⁰ These may become objects of conscious attention, but whenever they do, the psyche remains at work generating new feelings, new habituations, and new expressions of its inner sentience, all of which remain implicit mental realizations until mind brings them to consciousness.

Kant and legions of successors from Sellars to Davidson have presumed that in order for a content to be other to consciousness and stand as an object, it must involve a conceptualized unity. On this basis, the conceptual cognition ascribed to understanding is regarded as necessary to the subject-object dichotomy. Furthermore, insofar as concepts require language for their expression in thought or speech, linguistic intelligence is held to be necessary to any conscious awareness. Given the intersubjectivity of language, the subject-object dichotomy then becomes a threesome, involving the triangulation of subject-object and subject-subject relations by which concepts, expressed in language, succeed in referring to objects.

All that the psyche need offer, however, for the content of feeling to be something from which mind can disengage itself is the otherness of such content, whereby it stands distinguished from mind. This otherness is produced through habituation and involuntary expression without conceptual awareness or language. Habituation allows mind to withdraw itself from its own sensations, drives, and associated behavior, and obtain a universal character of its own. Involuntary expression enables mind to confront its entire sentient existence as a reflection of its own mental interiority, further opening the divide between mind and its felt contents. To awaken to conscious awareness, mind need only register these developments of its psyche and relate to itself as extricated from the field of feeling, which thereby confronts it as an independent sensed domain.

Neither conceptualization nor language need enter in for mind to make this transition from psyche to consciousness. Consequently, the subject-object dichotomy has a minimal character enabling consciousness to be, in the first place, both preconceptual and prelinguistic. Accordingly, consciousness can be had by dumb animals, by children who have not learned to talk and think,

and by adults who are unable to engage in speech due to congenital or acquired disabilities. Indeed, as will be shown, without this prelinguistic consciousness and the preverbal communication it facilitates, language could neither arise in the first place, nor be acquired by individuals born into a preexisting linguistic community.

8.2 Consciousness, Intentionality, and Representational Cognition

Psychologically speaking, intentionality consists in the awareness of mental contents as being about something. Conscious awareness is intentional insofar as consciousness's own mental contents figure for it as determinations of an objectivity from which consciousness is disengaged. Consciousness is thereby object-directed in relating to itself. What the ego possesses as its own sensation it no less treats as the specification of something other. In virtue of this dual relationship, consciousness's mental content is about something putatively independent of it.¹¹

Although consciousness qualifies as intentional, this does not mean that intentionality should be *identified* with consciousness. Consciousness can be considered *representationally intentional* to the extent that representational cognition relates to its belief as being about something given independently of its cognition. Mental content then figures as something intermediary between the ego and its other, representing that to which it refers. This places consciousness in the position of treating that given as the standard of truth of its belief or knowledge claim. To determine whether its belief is true, consciousness must compare it with the given comprising its putative object. This presents a daunting problem, for the moment consciousness attempts to carry out this comparison, the putative object can only be compared by being represented. That is, consciousness can only bring the object into comparison with its belief by rendering the object another mental content within the field of consciousness. Then, however, the independent character of the object is removed, undermining the authority of the resulting comparison. Instead of comparing a representation with something given apart from representation, the comparison compares one representation with another.¹²

If all intentionality were representational, relating to mental content as something independently given from mind, then consciousness might be identifiable with intentionality. If, however, mind can have mental contents that are about something, without that something figuring as given independently of thought, intentionality can extend beyond the limits of representational cognition.

The very possibility of philosophy depends upon an intentionality that is not representational. Philosophical discourse must be about truth, but truth

cannot be obtained if truth has a standard independent of thought. In that case, thought determinations would always represent what they address, leaving thinking no more able than consciousness to secure the correspondence upon which the truth of representation depends. Because the purported external criterion for validating thought can only be accessed by being thought, reason would always fail to uncover that criterion as it is in itself, as opposed to how it is construed by thinking.

This predicament of representational awareness is the cage in which foundationalism imprisons reason. Foundationalism construes justification always to reside in some privileged given that confers validity upon something separate from itself. This is exemplified by representational cognition insofar as the standard of truth for its beliefs resides in something given independently of those it sanctions. Whatever form foundationalism takes, it condemns thought to seek its truth in factors that can never enjoy the same legitimacy that they allegedly provide. This is because the privileged foundations always confer validity on something different from themselves, whose validity they ground. To be self-referentially consistent, foundations would have to ground themselves. This, however, eliminates the constitutive difference between foundation and what is foundationally legitimated. Validity is left residing in what is self-determined rather than determined by a separate foundation. Truth then no longer revolves around representations correctly conforming to independent givens, but in the realization of rational autonomy.

The subject-object opposition of consciousness may trap experience within foundational validation. Nonetheless, consciousness will prepare the way for a nonrepresentational, but intentional intelligence, whose discursive rationality will provide the psychological conditions for the philosophy of mind.

8.3 Consciousness Proper

Consciousness minimally involves mind relating to some independently unitary mental content as something other to mind. Because this relationship rests upon the psyche, the minimally unitary content of consciousness is more specifically determined as the totality of feeling through which the psyche communes with itself. In this first instance, consciousness is a subject distinguishing itself from a nonego consisting in the immediately given field of feeling with respect to which the conscious self both withdraws and relates. All aspects of consciousness incorporate this dual immediate relation, for any more developed awareness of objects involves something given to which to relate, a given initially present to mind in the feeling of the psyche.

In order for consciousness to relate to its own mental content, consciousness does not require any *concept* of the self, such as the thought of the “I” that Kant

alleges to accompany every conscious representation. All consciousness need do is something its relation to the psyche makes inevitable—*feel* its own mental determinations. Through this self-feeling, consciousness has, and always has, a preconceptual, prelinguistic, and prereflective self-relation. This self-relation is not self-*consciousness*, for the mental content to which consciousness always finds itself in relation is not thereby determined as the objectification of itself. It rather always comprises its awareness of something it confronts.

As *self*-related, conscious awareness cannot help but be unitary. To be conscious of more than one self would require a unitary standpoint that was itself aware of both putative “selves.”¹³ This logical truth is psychologically exhibited in both multiple personality disorders and split-brain patients. Individuals suffering from multiple personalities experience each of their selves in rotation, with complete ignorance of the others thanks to an amnesia about any preceding counterparts. Similarly, patients whose brain hemispheres have been disconnected do not experience a double self. Rather, each hemisphere’s “self” has awareness only of itself. In both these cases¹⁴ the attachment of multiple selves to the same person is rooted in the singular embodiment of the individual, rather than in a split consciousness. Consciousness is always one, just as is the objectivity it confronts.

8.4 Sensuous Consciousness

Accordingly, the most rudimentary consciousness consists in an immediate awareness of what is other to awareness, where this nonego has no further content than the given totality of feeling by which the psyche feels itself. Consciousness is therefore minimally sensuous consciousness, an awareness of “objectivity” as an immediately given manifold of sensation.

In this *immediate* relation to the totality of feeling from which it has disengaged itself, consciousness does not yet further organize or distinguish what it confronts. Any such mediating consciousness must be subsequent to this prior immediate consciousness, for whatever gets mediated by consciousness must first confront it in its immediate givenness. Comprising this immediate relating to what is immediately given to it, sensuous consciousness engages in no spontaneous ordering of the sensuous manifold, but exhibits instead a passive receptivity. Leaving its manifold undivided and undifferentiated, sensuous consciousness enjoys an indiscriminating completeness of reception. On both counts, sensuous consciousness might appear to be the “richest and truest kind of knowledge . . . since nothing comes between consciousness and its object which would distort the truth—no reflection or interpretation.”¹⁵ Yet this very absence of mediating activity on the part of sensuous consciousness deprives it of any de-

scriptive acumen with which to characterize what it confronts.¹⁶ It is aware that sensuous objectivity is, but it lacks the ability to determine its specificity, either preverbally or linguistically.

Admittedly, owing to the constitution of the psyche, consciousness senses through feelings that *are* mediated by the specific sense organs of the body, the physiology to which internal feelings are connected, the situation of the animal organism in its specific biosphere, habit formation, the memory of feelings and dispositions that this involves, and the expression of feeling. Nonetheless, the immediacy of sensation precludes any conscious awareness of these mediations and their differentiation. The psyche certainly feels distinct sensations, including pain and pleasure, desire and impulse, and the movements of irritability these involve. Being aware of their differences, however, requires not only recollections of past feelings, but comparisons and discrimination involving more than the immediacy of sensation.

On the exclusive basis of sensation, consciousness has no means of determinately identifying what it senses. *That* something is may be sensed, but determining *what* it is requires connections and demarcations of sensations that must involve something more than just another immediate sensation. Consciousness indeed senses an independently given totality with all the variegated content reflecting the individual's species specific neurophysiology, its personal condition and situation, and the drives that shape its attention. Yet the sensations do not alone dictate how their manifold is to be organized so as to engender consciousness of one's own body in distinction from other objects, or, for that matter, of one object in distinction from any other.¹⁷

The immediate awareness of the totality of feeling as something other than the self simply provides no resources for differentiating that totality. Consciousness *that* what is sensed *is* does not itself distinguish sensations from one another, nor secure their unification in individual sensed objects, nor demarcate whatever background encompasses them. The concrete reality of which consciousness is a part necessarily involves all the organization constitutive of space and time, matter in motion, physical and chemical processes, plant and animal life, and the psyche, but none of these factors is accessible as such to sensuous consciousness. Sensations may succeed one another in time, may be felt in specific regions of the body, and may reflect the interactions of the conscious individual with the surrounding environment. Sensuous consciousness, however, takes in the content of feeling immediately, without further organizing it temporally, spatially, qualitatively, quantitatively, or in any other respect.¹⁸ Sensuous consciousness has just as detached a relation to feelings arising from within the individual as to sensations linked to external stimuli. What is sensed is sensed here and now, but sensuous consciousness, by confronting objectivity immediately, draws no distinctions between any determinate locations or times, or between any quantitative or qualitative features

that its sensations may have. The buzzing blooming totality of sentience is externalized as what is other to consciousness, but its immediate givenness forms a completely abstract unity, in that what is held together in the sensuous manifold is not thereby determined in any further respect.¹⁹

For this reason, Kant is wrong to impute temporal and spatial organization to immediate consciousness of the sensuous manifold. As Kant's own analysis of "pure understanding" indicates,²⁰ awareness of the spatio-temporal character of objectivity requires a more developed consciousness than that of sensation. Indeed, as Peirce observes, we can have absolutely immediate consciousness of nothing but the fleeting instant, and in an instant consciousness can neither divide nor synthesize, but only feel,²¹ sensing the being of the immediately given, but not what it is or how it is ordered in any determinate respect.

Insofar as the totality of the sensuous manifold is sensed immediately, in complete abstraction from any other discrimination, the self of sensuous consciousness is an equally abstract ego, wholly indifferent to the content of the felt manifold given to its indiscriminating standpoint. Sensuous consciousness comprises the same self-related apprehension of a sensuous manifold no matter what gets sensed and no matter where and when sensation occurs. Even though every sensation felt by consciousness is relative to the body, its situation, its drives, and the prior habituation and expression of the psyche, none of these concrete mediations bear upon the unity of the disengaged perspective of sensuous consciousness. Since sensation is not enough to enable the self to discriminate its own body and embedment in the world, consciousness of the manifold does not impart any specific content to the ego. Sensuous consciousness remains the immediate standpoint to which the totality of feeling is given, without thereby obtaining any further qualification.

Since feeling is immediately given, habit is just a second nature with which the psyche finds itself encumbered, and the expression of feeling by the psyche is involuntary, sensuous consciousness remains passively receptive even if the psyche is hardly a *tabula rasa*. What confronts consciousness as its other is still the same content that the psyche feels itself to be. Consciousness may be responsible for relating to that content as something from which it is disengaged, but that disengagement does not as yet alter, let alone create, what is sensed. Although bodily movements and habituations certainly affect what consciousness senses to be, conscious awareness does not itself determine the content of its manifold.

8.4.1 SENSATION AS A "DECAUSALIZED" CONTENT

Although sensuous awareness does not yet discriminate things and properties, let alone distinguish its own body from other objects, consciousness cannot

sense any objective being from which it is disengaged unless the physiology of sentience permits separating the dynamic imprinting of sense impressions from the content of sensation.²² Only if consciousness can stand back from the interaction by which physical reality impinges upon sensibility, can there be an awareness of some objective being, rather than of some modification wrought upon the subject.²³

Consciousness's ability to hold itself aloof from the causal efficacy of sensation is not just a matter of habituation, by which the psyche manages to withdraw from immersion in its own feelings. Habit may free attention from immersion in feeling, but that does not enable feeling to sense anything. For that, mind must further focus on the content of its sensation without overwhelmingly *feeling* its own mental modification.

This depends upon matters of physiological measure regarding the intensity of sensation, as well as the difference in scale between the sentient organism and the action of sense stimulation. As Jonas points out, if the sentient organism does not far exceed in dimension the actions and reactions affecting its sensibility, these cannot be integrated into one continuous and homogeneous "impression" indicating a presence from which the subject can detach itself.²⁴ When the individual does not loom over the impacts of sensory stimulation, these cannot produce any becalmed awareness of a being apart. Instead, they yield only the mind's own affection by a collision from which it cannot distance itself.²⁵ Only small-scale influences can produce sensations, whereas relatively large-scale perturbations of the sensory apparatus cross the threshold of objective apprehension and revert to feeling.

This is evident when the heightened intensity of sound, light, smell, touch, or even taste transgresses the limits of sensory discrimination, producing sensations of pain and pressure where mind can attend to nothing but its own feeling.²⁶ In order to sense objectivity, sense organs must be protected from sensory overflow, be it by insuring that the normal scale of stimulation remains small in respect to that of the organism or by being shielded from overwhelming excitation.²⁷

On the other hand, if the stimulation drops below a sufficient threshold of intensity, mind may be left with only a feeling, too faint to sense anything determinate.²⁸

8.4.2 THE SELF-RELATION OF SENSUOUS CONSCIOUSNESS IS NOT SELF-CONSCIOUSNESS

The self-relation of mind in sensuous consciousness no more involves self-consciousness than does the self-relation of the self-feeling psyche. To be self-conscious, mind must relate to itself as an object of consciousness. Whatever

mental content serves to indicate consciousness must face the mind as an object from which the subjective awareness of it is extricated. How this is at all possible is a question properly addressed when self-consciousness becomes thematic. At the juncture of sensuous consciousness, the only term that mind relates to is the subjective mental content of sensation, which it distinguishes from itself as the nonego. Although consciousness confronts its mental content as objective only by disengaging itself from it, mind's own sensing of its sensuous manifold is not an object for it. What consciousness senses is what is immediately apart from itself, rather than its own awareness. Still, unlike the self-feeling of the psyche, consciousness does thereby occupy the subjective pole of a subject-object dichotomy, relating to a nonego, so far determined simply as having immediate being.

Although self-consciousness may be absent, self-relation is necessarily at hand in sensuous consciousness just as much as in every other form of mind. The psyche must relate to its feelings in order to feel itself and similarly sensuous consciousness must relate to its own sensations in order to be aware of any nonego. In neither case, however, is mind conscious of itself as an object. The psyche relates to no object of any sort, whereas sensuous consciousness relates only to an immediate objectivity from which it is extricated.

This is why consciousness, in sensing what is given, is aware of its sensations without *sensing* its sensing, that is, without relating to its own awareness *as* an object of its consciousness. As Aristotle points out, if sensing is itself *sensed*, then each of the senses would have to have the sensible quality it or another sense registers, such that vision would have to be visible or audible or have an odor or flavor or be tangible, and so forth. Moreover, each form of sensing, as something sensible, would then be perceived as such only by a further sensed engagement of sensing, engendering an infinite regress that can only be removed if sensing is related to by mind without being an object of sense awareness.²⁹

The presence of self-relation and the absence of self-consciousness in both psyche and sensuous consciousness makes evident how presuming all consciousness to be self-conscious is just as misguided as holding all mental awareness to be conscious or all intentionality to be representational.³⁰ Although modern phenomenology has absolutized the opposition of consciousness by making conscious intentionality the foundation of all mental life, it has recognized that conscious access to one's own mental content is not equivalent to knowing oneself as an object. Consciousness, to paraphrase Sartre,³¹ has a prereflective acquaintance with its representations, without which nothing could be given for its standpoint. This acquaintance is prereflective in that consciousness is aware of its mental contents making something objective appear, without thereby apprehending its subjective awareness as an object on which it is reflecting. Consciousness can reflect upon its own awareness, taking it as an object of its

apprehension, but in doing so, consciousness remains prereflectively acquainted with the mental representation of its self-reflection. That is, in taking its own consciousness as an object, consciousness is taking as its object not its self-consciousness, but its awareness of an object other than itself. Indeed, the very fact that consciousness can reflect upon its awareness of objects is indicative of how that second-order self-reflection is something *in addition to* my sensing of a manifold, my perception of objects, or, for that matter, my understanding of a world governed by forces and laws. For this reason, to paraphrase Searle,³² all conscious states do not have themselves as an object nor whenever I am conscious of anything, am I conscious of myself being conscious of it. Conscious awareness must always involve self-relation, without which mind has no access to any mental content by which to apprehend anything objective. How that self-relation becomes associated with self-consciousness, however, comprises a *particular stage* in the development of consciousness.

As will be shown, self-consciousness can emerge only through desire of objects and awareness of other desiring individuals.

8.4.3 SENSUOUS CONSCIOUSNESS IS PRELINGUISTIC

Sensuous consciousness is clearly prelinguistic.³³ The immediate relation to feeling as the given to which mind relates and from which mind is disengaged has no room for mental contents that count as representations with which meaning is associated. Representation itself contains a relation between some mental content mediated by another and some determinate referent. Unlike conscious sensation, which simply senses what immediately is, representation internalizes what has already been intuited, thereby generating an image to which some significance is conferred. Moreover, any semiotic relation involves mediation between sign and signified as well as between language users and established linguistic practice. Sensuous consciousness is devoid of all these mediations, which themselves indicate how language itself depends upon a prior prelinguistic intentionality operating first at the level of consciousness and then, as we shall see, at the level of intelligence.³⁴

This is ignored by any argument attempting to show that sensuous consciousness is linguistic because it involves knowledge claims that require concepts and therefore language.³⁵ Such an argument presupposes not only that knowledge and discursive intelligence necessarily go together, but also that sensuous consciousness makes determinate knowledge claims. The former assumption can be retained while sacrificing the latter. Provided sense certainty involves no determinate knowledge, sensuous consciousness can be prelinguistic without canceling the alleged tie between knowledge and language.

If knowledge is inherently conceptual and concepts require language, no conscious perceptual knowledge and understanding could be prelinguistic. Whether this is so, remains to be seen. What can be immediately considered, however, is whether sensuous consciousness, being prelinguistic, still involves knowledge. This will shed light on whether mind's relation to a nonego, the subject-object dichotomy basic to consciousness, inherently involves discursive intelligence. If sensuous consciousness need not employ concepts or language to sense a manifold confronting it, the possibility of a prelinguistic consciousness will be established.

The establishment of this possibility will then make intelligible how infants and animals can have intentional states without language, allowing, for example, babies "to want milk" or dogs to "want to be let out," and, more generally, make intelligible how consciousness can have a representative, intentional content, that is not propositional.³⁶

8.4.4 DOES SENSUOUS CONSCIOUSNESS INVOLVE KNOWLEDGE?

If sensuous consciousness is prelinguistic, can it still involve knowledge, and, if not, can it retain any awareness of a nonego?

The conscious ego relates to its feeling as the specification of what is immediately given. In so doing, consciousness can be certain of the objectivity of its sensation to the degree that certainty is an immediate holding of mental content and nothing else in conscious awareness serves to connect the sensuous manifold with the given. Employing no mediating factors to secure that connection, sensuous consciousness relies on no grounds or interpretive acts that could be sources of doubt. Accordingly, sensuous consciousness is *sense-certainty*.

The sensible is sensed as given to consciousness, without any further qualification, owing to two coordinate features. On the one hand, the totality of feeling has a unity of its own, abstract insofar as it leaves otherwise undetermined what sensations it contains. On the other hand, mind has a disengaged abstract unity, relating to itself as the standpoint to which the sensuous manifold is given. Owing to their very abstraction, these correlative unities both involve no additional determinate concepts.

Lacking any further mediation, what sensuous consciousness is aware of is devoid of any universal connections, including spatial and temporal relations. Sensuous consciousness cannot know *what* it senses is, nor what *properties* and *relations* any object has, nor *where* or *when* it or any object is situated. Doing so would in each case require mediating the sensuous manifold and being aware of those mediations. Knowing the *kind* of anything given requires connecting sen-

sations with a genus and/or species, just as cognizing the *properties* or *relations* of an object necessitates relating abstract features to the thing that possesses them. Knowing the spatio-temporal arrangement of objects similarly demands ordering sensations in terms of time and space. Sense-certainty precludes any such associations, since all that sensuous consciousness is aware of is *that* the sensuous manifold *is*. Nothing else about the given is therein affirmed. Hence, sensuous consciousness has no determinate knowledge, nor any determinate concepts.

Moreover, restricted to sensation, sensuous consciousness cannot refer to individual objects any more than know them. Lacking any resources with which to be aware of properties and their unification in a thing, species and genus, or space and time, sensuous consciousness can neither employ definite descriptions nor spatio-temporal location to identify any referent and distinguish it from anything else.³⁷ This inability to achieve identifying reference applies just as much to the ego's own body as to other tangible objects. Consciousness can no more *sense* the individuation of its own awareness than it can *sense* any individuated instant of time or point in space. Lacking any contextualizing mediations, direct sensing of "here" and "now" is just as devoid of distinguishing identity as is the disengaged standpoint that senses what is.³⁸ "Here" and "now," as immediate indications, may be any time and place, just as "I" who merely senses whatever is may be any passive receptivity.³⁹ All sensuous consciousness can be certain of is the indiscriminated sensuous manifold, of which there is nothing determinate to think or to say.

How then can consciousness become aware of a mediated, rather than immediate content, and how can consciousness mediate, rather than immediately relate to its object? And can any mediations enter into consciousness without thought and language?

8.4.5 THE SOURCES OF MEDIATION IN SENSUOUS CONSCIOUSNESS

Although sensuous consciousness relates immediately to the given content of the totality of feeling, in so doing, sensuous consciousness both produces and encounters manifold mediations.

Given the reality of sensuous consciousness as an embodied awareness, supervening upon a psyche, itself supervening upon an animal organism in a determinate biosphere, the sensuous manifold in consciousness already reflects the elaborate organization of all the mechanical, physical, chemical, biological, and psychological mediations pervading the life of the mind. That sensuous consciousness lacks the resources to apprehend these mediations cannot alter the inescapable fact that they are all at hand. These real processes exhibit every

type of universality—the abstract universality of inhering qualities, the reflected universality of class membership, the necessarily differentiated universality of genus and species, and the concrete universality of immanent conceptual determination.⁴⁰ Accordingly, the reality sensed by sensuous consciousness is already determined through the forms of judgment and syllogism connecting these types of universality to the types of individuality and particularity they inform. These connections are all at hand independently of and prior to the emergence of language and discursive intelligence. Nor do these connections first originate in any acts of construction by consciousness.

Moreover, the sensuous manifold is determined in space and time relative to the species being, individual condition, vantage point, and activity of the body of the conscious individual. What the individual senses depends upon the unique itinerary of that individual through its biosphere, what sense organs it possesses, their state, how the individual orients them, and, particularly in the case of the least “theoretical” senses, taste and touch, how the body dynamically interacts with its tangible surroundings. Much of these orientations and interactions are already bound up with the self-feeling, habituation, and expression of the psyche. Nonetheless, sense consciousness cannot discriminate them or their impact upon its sensation so long as all consciousness does is immediately sense the being of its manifold. For this reason, the specific difference between the various senses does not yet play the role that it will in the more discriminating mediations of sense-perception and understanding.

Insofar as the sensuous manifold is immediately sensed, its diverse contents are given external to one another, without any inner connection. Any internal organization would involve mediation, but sensuous consciousness, relating immediately to what immediately is, confronts an objectivity that, for its mode of apprehension, is devoid of mediation. Set over and against sensuous consciousness’s own subjective awareness, the manifold thereby comprises an objectivity external to consciousness that is equally external to itself. Sensed objectivity is self-external to the degree that its sensed manifold content is apprehended as lacking all internal mediation.

This self-external objectivity is, in the first instance, a spatial expanse, whose every point has others outside, generating lines bounded by other lines, producing planes adjacent to other planes giving space its volume. The spatial totality is further external to its whole self as a temporal realm, where space at one time gives way to space at the next moment, rendering the entirety of space outside itself in each successive instant of time. Since, however, conscious sensation only confronts what is as immediately here and now, spatial and temporal *relationships* are not yet apprehended in themselves.

Nevertheless, consciousness does mediate its sensuous manifold by sensing it, setting underway a series of transformations in the appearing content of the

object and the way in which consciousness is aware of it. The initial mediation is present the moment the sensuous manifold is “given.” Although what is sensed is sensed as having an immediate being, this minimal object is given to consciousness only in virtue of the ego’s relation to its own mental content. Instead of being immediately given, the sensuous manifold is given to consciousness only by being for consciousness, mediated by its standpoint, whose embodiment gives it a unique vantage. That vantage is not only here and now as an otherwise abstract spatio-temporal location, but qualitatively conditioned by the specific life process of the individual. Sensuous consciousness may be an abstract certainty, leaving the content of the manifold unmodified, but what it senses is what the perspective of consciousness’s disengaged ego takes in by registering its sensation. That may be an immediate receptivity, but it is the receptivity of an individual awareness, belonging to an individual animal organism and psyche, uniquely situated in a specific biosphere with which it metabolically interacts. Hence, the sensuous manifold given in sense certainty is the sensuous manifold as belonging to the individual living standpoint of consciousness, and thereby mediated by that relation and everything it encompasses.

Conversely, the standpoint of sensuous consciousness is not just immediate itself, for it stands in relation to the individual sensuous manifold of which it is aware. Sense-certainty may take in that content immediately and do so as if it were immediately given. Yet sense-certainty is not thereby unqualified. It is the sense-certainty of the *specific* sensuous manifold given to it. Instead of being immediate and indeterminate, sense-certainty is mediated and determinate, distinguishable from sense-certainties of *other* totalities of feeling sensed or potentially sensed by *other* living individuals.

8.5 Sense-Perception

Given the dual mediations implicit in sense-certainty, consciousness is in a position to relate to a *mediated* sensuous manifold and to do so in a *mediated* manner. Minimally speaking, this mode of consciousness comprises perception of sensible existence, where perception signifies a discriminating taking in of the sensuous given and sensible existence signifies a tangible totality that contains mediation. Once more, the two sides go together. By separating and connecting its individual sensations, consciousness relates itself to a given consisting of differentiated and associated contents, comprising manifold things with different properties and relationships.⁴¹

Perception may pose a daunting challenge to proponents of a disembodied mind for whom sensation is rooted in corporeal sense organs, perceptual association is something mental, and their relation appears inexplicable.⁴² Yet,

insofar as consciousness is intrinsically embodied and encompasses the psyche, there is no ontological divide to be traversed. To move from sense-certainty of the being of the given sensuous manifold to perception of mediated existence, all consciousness need do is unite some of its sensations in distinction from others. In so organizing its mental content while disengaging itself from what it has rendered, perception confronts particular unities of sensations that differ from other such unities by holding certain sensations together. Sense-perception thereby perceives a world in which sensible entities are in contrastive relation to one another while each containing an internal relation of contrasted, but associated sensible features.⁴³ The latter are both distinguished and connected since if distinction were absent, there would be nothing to be associated.

Accordingly, sense-perception perceives a world minimally consisting of a plurality of sensible things each containing a plurality of sensible properties. Each thing has its identity by uniting its properties while differentiating itself from other things. Perceived existence thereby contains two complementary sets of mediating relations—those between each thing and its properties and those between things.

But how is consciousness able to differentiate and associate individual sensations in the sensuous manifold given by the totality of self-feeling? On the one hand, the world in which consciousness is situated necessarily involves its own unities and mediations owing to the physical and chemical relations of things, the life process of the conscious individual and any other living things in its horizon, and the worldly manifestation of the mental reality of the conscious individual and other conscious selves. Insofar as sensations arise in ways reflecting these objective realities, the sensuous manifold cannot fail to contain inherent unities and relationships. On the other hand, conscious mind possesses the psychological capabilities to organize its sensuous manifold in ways conveying at least some of these objectively given mediations. Much of the needed facility is already at hand thanks to habit formation. Through the automatic habituation to repeated feeling, the mind is able to detach itself from immediate immersion in sensation. This fruit of habit gives mind at least the negative freedom to withdraw from certain sensations and focus its attention elsewhere. Once habit and involuntary expression have set the stage for mind to disengage itself from the totality of feeling, consciousness finds itself discriminating among the sensations of the sensible manifold thanks to the same selective sensing provided by habituation. The moment consciousness begins to focus its awareness on certain unities of sensation to the exclusion of others, sense-certainty has given way to sense perception of things with sense properties.

Because habituation reflects regularities in stimulation, the perception of things equally reflects regularities in the biosphere as well as in the living individual that contribute to regularities within the sensuous manifold. At the level of percep-

tion, the association of sensations is not a deliberate product of imagination, but a given connection made in the mind with the help of the psyche. Although perception thereby depends upon preconscious habituation, the perceiving consciousness goes beyond it by treating the field of discriminated unities of sensation as a nonego, as an objectivity consisting of a plurality of unified entities, distinguished from one another while each uniting a plurality of sensuous determinations. In so doing, perception does not make its associating and projective activity an object of its awareness. Conscious perception instead relates to the mediated unities produced by that activity, treating them as independently given things with properties, through which they stand distinguished and interconnected.⁴⁴

This might appear to bring mind to the threshold of propositional knowledge, where universal qualities are predicated of objects in judgments whose use of concepts would involve discursive capabilities presupposing linguistic intelligence and communicative relations between speakers. For this to be the case, however, consciousness would have to relate to its differentiated sensuous manifold as if it comprised relations of particulars to universals, perceived as such.⁴⁵

By itself, however, the discrimination of perception does not establish these conceptual connections. As we shall see, the unifications and differentiations in the perceived manifold embody instead the two-tiered categories of essence, which involve paired relationships, such as essence and appearance, thing and properties, whole and parts, ground and grounded, and cause and effect, where one factor figures as the prior determiner of another. These categories do not yet involve universality, particularity, or individuality, nor the judgments in which these terms get qualified by one another, or, for that matter, the inferences wherein judgments mediate one another.⁴⁶

Nor, for that matter, does perception involve representation. Although consciousness perceives by mediating the sensuous manifold, it does not represent what it connects, as if depicting something no longer present. Instead, perception apprehends things as directly confronting consciousness.⁴⁷ Given the polarity of conscious awareness, where what is for mind is an opposing object, there is not yet any mental scope for relating perceptions to mental contents apprehended as such, be they images or signs. Consciousness may perceive reflections, echoes, and physical inscriptions, but not mental representations. Only intelligence can apprehend its mental contents as being both realizations of mind and about objects.

For all these reasons, perception can be attributed to both dumb animals and immature individuals who have not yet developed their linguistic capabilities. With perception exhibiting the same preverbal character as sense-certainty, consciousness once more proves itself to be not just a human possession, as Descartes wrongly maintained, but something common to a broader spectrum of animal life.

8.5.1 THE PERCEPTION OF THE EXISTENCE OF THINGS AND THEIR PROPERTIES

In perceiving the existence of things with sense properties, consciousness groups and distinguishes the contents of its sensuous manifold across the various dimensions its life encompasses. This involves associating and demarcating sense contents that are perceived in simultaneous spatial externality to one another as well as in temporal succession across the same or different spatial locations. Both “synchronic” and “diachronic” groupings go together. If only simultaneous associations occurred, grouping sensible contents together at just one instant with no enduring connections, their instantaneous apprehension would be no different from a consciousness of their cessation, leaving nothing perceivable. Only if some unity of sense contents can be perceived to persist, can any object be apprehended with a reality distinguishable from its absence.⁴⁸ By the same token, if the grouping of successive sense contents involves none that are connected to and distinguished from other *simultaneously* sensed features, no thing with properties exists at any moment.⁴⁹ Without coeval contrasting sense contents, there is nothing for perception to discriminate and combine at one instant or the next.

Accordingly, the consciousness of things with properties involves, paraphrasing Kant, a synthesis of recognition, where manifold sense contents are referred to the same entity by connecting successively varying sensations, rendering them sensuous properties of an enduring, putatively reidentifiable object.⁵⁰ For this reason, perception depends upon the retrieval capabilities of memory already provided by the psyche.⁵¹ Perception always has duration, for only by retaining successive sensations in consciousness can perception carry out its synthesis of things and their properties. The perceived “present” is therefore not something instantaneously fleeting, but a lived moment whose consciousness of an existence of things contains a depth of memories and habits, including some awareness of my body.⁵²

In and of itself, consciousness’s combining of successive sensations into an enduring perception of things is formal, insofar as it leaves undetermined *which* connections are made. Given the immediacy of the sensuous manifold as provided by sense-certainty, the simple contents of sensation possess no intrinsic ground for unifying them into any particular things.⁵³ They may be different or alike, but without any discrimination of internal differentiations, each sensed content manifests nothing that could determinately connect and distinguish it from others. Accordingly, perception appears to involve a sheer choice, where consciousness wholly arbitrarily associates and discriminates the contents of sense certainty. Yet, because the perceiving consciousness is a living individual interacting with its world, the operations of perception are tied to two factors that already provide tendencies for certain combinations being made.⁵⁴

One such factor is the general metabolic urge of the animal organism, which coordinates sentience and irritability to engender discriminations among sensations facilitating those interactions with the environment enabling the living individual to sustain itself and its species.⁵⁵ These discriminations become engrained by habit insofar as they need be repeated. Thereby consciousness finds its attention drawn to perceiving enduring, predisposed associations grounded in the individual's vital interests and the world in which they are realized.

Contributing to this molding of perception is a second factor consisting in the central role played by the sentient body of the perceiving consciousness. This role revolves around how the perceiving individual senses and proprioceptively feels the orientation, configuration, and condition of its body in coordination with variations in the sensations of other objects. Admittedly, the perceiving individual cannot become conscious of this coordination without experiencing successive perceptions and employing memory to recognize the abiding role of its own body. This involves more than the body's unique status as a thing both sensed and felt internally. It further involves how the body uniquely affects the way all other objects appear to consciousness. As the perceivable impact of these relationships unfolds, the centrality of the individual's body in the ordering of the perceived world becomes reflected in whatever discrimination among sensations consciousness performs in perceiving things.

These tendencies become compounded once consciousness moves beyond the perception of things to an understanding of their dynamic relations. Then the embodied individual's active agency in its own world becomes an equally ubiquitous factor in consciousness's comprehension of the play of forces confronting it.

Nonetheless, none of these conditioning relationships are themselves objects of the perception they underlie. In perceiving things through successive and cotemporaneous syntheses, consciousness no more perceives its own mediating mental activity than sensuous consciousness senses its own immediate apprehension of what opposes it. In each case, the relating of consciousness to its mental content confronts mind with an independent objectivity, rather than manifesting consciousness's own process to itself. Not until the emergence of intelligence will mind explicitly apprehend what is for it as the work of its own mental activity.⁵⁶

8.5.2 THE SYNTHESSES OF PERCEPTION AND THE INDIVIDUAL SENSES

Given the living reality of conscious mind, perception's cotemporaneous and successive syntheses occur, to begin with, when consciousness groups together

sensations registered within the field of a certain sense organ. Each sense organ has its own modality, involving a specific relation to the orientation and movement of certain parts of the body, as well as different types of activity toward what is perceived and different ways of synthesizing sense contents. Accordingly, every act of perception involves a dual consciousness, involving awareness of the perceived objects as well as sensation of the physical engagement of the sense organs at work.⁵⁷

8.5.2.1 Sight

Sight, as well as senses that register electromagnetic radiation of any other form, apprehends a manifold whose visible, electromagnetic differentiations coexist in spatial externality and are sensed not by immediate contact, but at a distance⁵⁸ with virtually no causal interaction that would otherwise perceptibly alter consciousness and its object. Remote sensation goes together with “simultaneity of presentation” and “dynamic neutrality.”⁵⁹ Unless the differentiations of the manifold are sufficiently separated to fall outside one another without obstructing their respective appearance, coexisting properties cannot be sensed. On the other hand, unless the sensed object is sufficiently distant from the perceiver, both risk being noticeably affected by the process of sensation.⁶⁰

Sight can enjoy the greatest benefits of sensation at a distance because light travels with relatively little distortion faster and farther than any other sensory medium, enabling vision to take advantage of the widest, deepest view of appearances, reaching back into the most remote infancies of stellar history.⁶¹ Providing in its extended field contemporaneous sensations immediately ready for grouping, sight allows for remotely perceiving things comprised of simultaneously given features with an unparalleled range and acuity. On this basis, further groupings can then be made among visual, electromagnetic sensations that extend over time and space, which must be recalled to be associated as aspects of persisting and altering things. Even when visual aspects such as color have a varying duration and movement, however, they do not intrinsically relate to their temporality, as do nonvisual phenomena like melody, whose temporal sequence is constitutive of its content as a sound experience.⁶² Yet in order for color to be perceived as a property of a real thing, visual sensations must be connected over time. Only then do they enable consciousness to see an enduring thing, rather than an instantaneous vanishing.

Whether the visual manifold is simultaneously or sequentially sensed, the perception of vision is conditioned by the movement, orientation, and focusing of the organs of sight, which determine the visual field and influence how consciousness’s own visible body gets seen within that vista.⁶³ Nonetheless, due to light’s supreme velocity and distance transmission, this orienting activity leaves

seen objects largely undisturbed, aside from whatever gravitational attraction, electromagnetic emissions, or sound waves are produced by the remote body of the perceiving individual.

Similarly, the dynamic effect of objects upon the perceiver is most completely neutralized in sight, insofar as the visibility of things ordinarily leaves the perceiver otherwise undisturbed,⁶⁴ only even appearing insofar as the individual opens its eyes and orients them toward what is to be seen. Vision, like the other senses, can be overwhelmed by intensities of sensory stimulation that supplant the objectivity of perception with an intrusion of subjective feeling, such as when sufficiently blinding light produces more pain than sight. Yet, under conditions where vision can operate and perceive things at a distance, objectivity presents itself in simultaneous externality with the least traces of any subject-object dynamic interaction.⁶⁵ What sight holds together in its view reflects a predominantly “theoretical” mediation,⁶⁶ without obvious “practical” impact upon the visible.⁶⁷ As neither the visible nor the visual perceiver need perform any *perceivable* action upon one another for sight to occur, the “effortlessness” of visual perception lets consciousness and its object seemingly be as they are,⁶⁸ a “self-contained subject” confronting a “self-contained object” without any causal engagement.⁶⁹ Even when opening one’s eyes, shifting one’s gaze, or changing focus, visual perception manifests no causal effect upon its object. Hence, vision presents itself as a pure receptivity. To attentively see, we suspend activity upon what we regard and “stop to look.”⁷⁰

The virtual absence of dynamic practical modification of the object seen by the act of seeing seems to grant a preeminent objectivity to visual appearance, at least if other senses fail to match the “theoretical” causal neutralization of sight. Hence, it is unsurprising that since Plato philosophers who ascribe a contemplative character to knowing have taken vision as the paradigm for all genuine cognition, construing even purely conceptual theorizing as an exercise of inner vision.⁷¹ Certainly due to the lack of collateral alteration of either subject or object in vision, the seen thing is readily distinguishable from subjective affects of its visibility.⁷² Compounding that apparent objectivity is how the simultaneity of vision presents the abiding coexistence of things, which remains unaltered by the subjective itinerary that vision takes as the viewer changes viewpoint, glance, and focus.⁷³ In this respect, vision comes close to anticipating the freedom of imagination, opening a dimension of simultaneous presence over which mind’s attention can wander, scanning a visual field remaining relatively the same while being viewed.⁷⁴ The visual field is not yet re-presented *as* an image by the imagination, but the unengaged distance of the visible affords something of the “neutrality” by which an image becomes distinguished from an “impression,” ever ready to be recalled and imaginatively altered by mind.⁷⁵ Yet, the so displayed absence of practical interaction equally raises the specter of illusion,⁷⁶ for visual

sensations bring little other mark of nonsubjective reality besides excitation of the organs of sight.⁷⁷

Vision's perceiving at a distance is emblematic of the sensibility of animal life, which does not have the immediate metabolic relation to means of satisfaction that characterizes plants, but must motivate itself to make an effort to obtain what it senses from afar. Yet, relative to other senses, sight provides the most far-reaching and most discriminating remotely sensitive perception. Whereas other senses may remotely perceive, for example, a sound or smell, in so doing they do not thereby sense what lies between that distant source and the perceiver. Vision, by contrast, sees distant things across an intervening vista, which falls within the visual field.⁷⁸ Thus, sight takes in a whole expanse in which seen things are visibly situated. How this expanse is perceived to have depth of field depends upon how consciousness associates the various visual aspects, which, as we shall see, will involve the contribution of touch.⁷⁹

Nonetheless, sight's acutely extended apprehension of distant things together with the environment in between provides the most enhanced biological advantage of gaining more time for adaptive behavior,⁸⁰ promoting the freedom of action of the perceiving individual.⁸¹ Similarly, vision's "simultaneity of presentation" affords the liberty to select where in consciousness's field of vision to focus its attention.⁸² And when sight perceives objects so remote that practical interaction is virtually precluded, the possibility of a completely "disinterested beholding," essential to a purely "objective," theoretical apprehension, becomes a sensory phenomenon.⁸³

This "theoretical" character of sight is not undercut by how the identification of what is seen can subsequently trigger an emotional response enabling the individual to react appropriately. These additional stages in the employment of vision in the life of the individual are exhibited neurologically in *homo sapiens* by how, as Ramachandran points out, nerve transmissions proceeding from excited photoreceptors in the retina travel through the optic nerve to more than thirty areas in the back of the brain, which enable identification of what is seen, and then relay their results to the amygdala, the part of the brain involved in the limbic system that makes possible emotional reactions.⁸⁴ Indeed, this emotive dimension can further affect what an individual recognizes to have perceived, as exhibited in all the psychological denials, repressions, rationalizations, and other devices that serve to maintain a certain self-understanding.⁸⁵ Nonetheless, sight enters into all of these subsequent modifications with the distinctive "disinterested, theoretical" character that gives it its special role.

A different situation confronts the other senses, without removing all ambiguities of perception. Whereas sight (broadly understood to include all electromagnetically sensitive sense) characteristically perceives with a simultaneous presentation of its manifold, a neutralization of the causal affection of sense, and

at a distance,⁸⁶ other senses perceive by organizing their respective manifold only through a temporal series of sensations, with varying degrees of physical contact and causal interaction affecting more than the mere appearing of the object or the receptivity of the sense.⁸⁷ To perceive a thing with properties within their own sense modality, these nonvisual senses must construct their perceived entities out of the ongoing succession of sensations.⁸⁸ In so doing, they each engage in a synthesizing that, on the one hand, always potentially extends through further incoming “impressions,” while, on the other hand, continually requires retaining for consciousness the prior sensations to enable them to figure as connected aspects of the thing perceived.⁸⁹

This does not entail that mere sensation need involve memory to constitute its immediate manifold and be conscious that objectivity *is*. Since sensation immediately senses what is, neither simultaneous nor time-series syntheses mediate its consciousness. Perception, as a sensation-*mediating* consciousness, is another matter. Any *perceiver* with more than vision must be endowed with at least sufficient short-term retention to construct the temporally successive manifold by which one can perceive things. Whether consciousness can perceive *solely* visually hangs on whether any other sense has necessary priority (e.g., touch, as Aristotle suggests⁹⁰) and how crucial intersensorial perception is to consciousness of objective things.⁹¹

8.5.2.2 Hearing

Hearing is almost as “theoretical” a sense as sight, since sound can be heard at some distance, although that distance ordinarily extends much less than that at which electromagnetic radiation can be perceived. This is due to the fact that sound requires a medium to transmit the vibrations of the sounding body, whose communicated motion to and fro involves more physical impositions upon both perceived object and perceiving sense organ than does the transmission of light.

Such imposition is reflected in how sound intrudes upon the hearer, who lacks the degree of selective control with which visual sensations are perceivable. Instead of simply closing or opening one’s eyes and then moving them across one’s vista to focus upon what is near or far, one hears as the relatively passive recipient of the noise of events. Even if one had moveable ears, which might affect the volume at which variously located sounds are heard, one still could not block out the communication of noise through the encompassing sound medium. It is thus no accident that ears are generally configured to be continually open, ready to receive the externally contingent happenings producing sounds.⁹² Those sound events are largely contingent since, with the signal exception of animals, most things emit sound by being made to vibrate by something external. Hence, whereas reflective objects will be visible whenever light is present, an object will

not sound whenever an elastic medium extends between it and prospective hearers. One must wait for that moment when the object happens to get set into vibration, be it from an internal or external impetus.⁹³

Insofar as sound is produced by the vibrations of the objects that are heard through the whole resultant impact of the oscillating sound medium, the auditory manifold gets perceived in its temporal succession, rather than in simultaneous presentation.⁹⁴ This is true even when hearing distinguishes coexisting sound unities, as when listening to polyphony and/or harmony or to different voices simultaneously speaking. In all these cases, the auditory phenomena can only be distinguished in virtue of serial registrations of their simultaneous streams of sounds.⁹⁵ Hearing an isolated interval can no more establish its polyphonic or harmonic identity than hearing the momentary unison of several voices can determine their separate identity.⁹⁶ Instead of being presented in a simultaneous manifold, the perception of any juxtaposed plurality of heard objects resides in the unitary consciousness of ongoing groupings of concurrent sound series.⁹⁷

Since hearing perceives a temporal succession of sounds rather than a coexistent manifold, the hearer confronts an objectivity always in becoming, whose ongoing auditory perception must take it in as it unfolds.⁹⁸ Therefore hearing cannot retain the freedom sight enjoys by being able to determine when and how it senses the simultaneous visual field facing it at every moment.⁹⁹

In and of itself, the purely auditory “thing” is a strictly temporal unity, whose extension coincides with that of its hearing.¹⁰⁰ Because the thing that consists solely of sounds endures just as long as the auditory experience of it, the object to which sounds refer cannot be perceived to extend beyond their mere hearing,¹⁰¹ unless consciousness engages in other syntheses going beyond the mere perception of sound. Sounds may contribute to indicating both the actions by which they are made and any enduring entity that exists apart from the noise it produces.¹⁰² Auditory perception, however, cannot secure these objective indications without being supplemented by further mediations, involving on the one hand, other modes of sensation, and, on the other hand, dynamic interpretations that transcend the limits of perception and call for understanding.¹⁰³

8.5.2.3 Smell and Taste

Like hearing, the perception of smell occurs at a distance and passively receives its sensations. Smell does so through the chemical emissions that waft through the air to make contact with the olfactory sense organs, not unlike sound waves that radiate from their source to intrude upon hearing. Yet whereas sound leaves its emitter relatively intact, smell depends upon the gradual loss of chemical particles by its source. For this reason, odors ordinarily extend less than sounds, enabling smell to depend more on how the perceiver moves and orients itself to-

ward the source of odor. Whereas a proper view may need increased distance and hearing may improve at a certain remove from sources of sound, smell can hardly gain from distance¹⁰⁴ unless odor is so overpowering that only fainter emanations can be tolerated without overwhelming discomfort. Moreover, insofar as an odor can be perceived only so long as its source is emitting some of itself in the process of its olfactory perception, smell is less theoretical and objective than hearing, not to mention sight.

Taste, with which smell is often conjoined,¹⁰⁵ also depends upon the reception of chemical emissions, but the process here involves a direct contact with the source of taste that at least partly dissolves it. Since tasting ordinarily requires appropriate actions on the part of the taster, it involves a practical initiative, allowing consciousness to determine when and what it will taste. Furthermore, the process of tasting takes place over time, which can give taste a temporally successive manifold if the dissolution of the tasted object produces a series of different tastes. Nevertheless, because taste, like smell, presents a simultaneous manifold of its own, perception can here engage in associating and demarcating coexisting sensations. Since, however, the dissolutions that are tasted and the emissions that are smelled only exhibit some general chemical properties of their sources, the possibilities of objective perceptual discrimination are comparatively limited. This relative objective impoverishment is a chief reason why the culinary arts and olfactory art (e.g., perfume design) cannot rival the artistic achievements of visual art and music.

8.5.2.4 *Touch*

Touch depends upon immediate bodily contact with resistant objects, thereby sensing a coexisting tactile manifold. Tactile perception, as sensing resistance, might seem to be “the direct and immediate apprehension of the Other-than-myself.”¹⁰⁶ Yet, one may touch one’s own body, resisting not something else but only another part of oneself. Secondly, whether one touches oneself or an external thing, one’s tactile perception is not completely direct and immediate. Although it may appear to involve a simultaneous presentation similar to that of sight,¹⁰⁷ touch cannot sense the resistance of its object without engaging in a dynamic interaction, requiring movement and pressure. Any sensing of texture, elasticity, solidity, or shape involves successive apprehensions of a manifold unfolding in time, similarly to hearing. Yet in addition, feeling texture and shape require motion of tactile sensitive body parts relative to the surface of an object, just as elasticity and solidity can only be felt by progressive exertion of pressure between one’s body and a resistant thing. Thus, consciousness cannot perceive the shape, mass, texture, or cohesion of something by simply associating simultaneously given tactile sensations. Instead, these unities indicate the static

tactile existence of things only by being perceived through a synthesis of a series of touch sensations.¹⁰⁸ Unlike hearing, however, touch only encounters its time-series manifold through some relative motion and resistance between the perceiver and the objects to be felt. This can involve situations where the touched thing moves into contact with and over the body surface of the perceiver, with the latter offering some resistance. Yet, more characteristically, tactile perception results from bodily activity on the part of the perceiver, who must move to make contact with and feel the tactile differentiations of things.¹⁰⁹ In either case, the associative construction of the tactile thing involves coordinating successive proprioceptive sensations of the perceiver's body position and exertions, without which the spatial dimensions and resistance of a thing cannot be ascertained.¹¹⁰

Proprioceptive sensations might seem to register the body's position at any moment through a simultaneous tactile manifold. For example, one appears to instantaneously feel the shape of an object by correlating coeval touch sensations at different locations on one's body with the proprioception of those body parts. Yet perceiving that manifold depends upon the kinesthetic feeling of exertions and pressures both within and at the surface of the body. Therefore proprioception of body position and effort itself requires bodily movement and the same successive synthesis that applies to the tactile perception of other things with which it is coordinated.

Consequently, the seemingly instantaneous, "atomic" touch perceptions such as shape, texture, or elasticity, have contents that intrinsically refer to time, even if they perceive the spatial presence of some entity. Tactile perception presents a spatial unity through the successiveness of sensations, by whose temporal synthesis a thing with a tactile quality such as "rough" or "smooth" alone presents itself for consciousness.¹¹¹ Thus, as Jonas observes, whereas sight presents "simultaneity through simultaneity" and hearing presents "sequence through sequence," touch presents "simultaneity through sequence."¹¹²

Although touch need not significantly alter what it feels as taste does in dissolving its object, the direct contact of tactile perception involves a dynamic, practical interaction distinguishing touch from both sight, smell, and hearing. This is reflected in how touch cannot simply occur by passively receiving sensations in the manner of hearing sounds or opening one's eyes and having the visual world intrude. Instead, touch requires directly meeting tactile things, either through their impacting upon one's body or by moving oneself to encounter them. Hearing and smell receive the whole totality of transmitted sound waves and chemical emissions, upon which consciousness can somewhat selectively focus its attention, just as vision confronts an entire visual field, within which it is free to focus. By contrast, the immediate contact to which touch is restricted limits tactile perception to that particular instance, which may, of course, follow from prior chosen motor activity.¹¹³

Insofar as resistance of one body to another is ingredient in touch sensation, it seems that tactile perception combines the feeling of tactile qualities with an awareness of force. Indeed, since resistance involves a reciprocal rebound without which any corporeal opposition disappears, every touch encounter involves action and reaction. Insofar as the material reality of something manifests itself in its resistant occupation of space, touch provides a sensuous testimony of such reality. Moreover, since the exertion of resistant force is mutual, the act of touch perception that discloses something tactile also discloses the perceiver's own tactile presence. Hence, insofar as I kinesthetically feel my own effort in resisting the material of something else, in perceiving my own tactile reality I perceive that of another corporeal thing.¹¹⁴

Consequently, proprioception informs all touch perception. Since proprioception in part depends upon bodily motor activity and all touch perception involves a reciprocity of force, touch-impressions resulting from the impact of things upon the perceiver's body still generally involve an *act* of tactile feeling. Since this act is kinesthetically felt in touching another thing, the perceiver senses that resistant object's relative position to its own body in connecting the serial presentations of the tactile manifold. This kinesthetic dimension of touch perception has important consequence for how the correlation of touch with sight and hearing afford them a spatial depth perception they would otherwise lack.

Nonetheless, although touch perception rests upon mutual pressure, the *experience* of force requires more than simply an association of tactile qualities as properties of a touched thing or of a touching body. Force may accompany tactile qualities on both sides, but consciousness cannot experience force itself in distinction from what is touched without engaging in some further mediation. Understanding force will first become possible by confronting and surmounting the limitations of perception.

One caveat must be made regarding the perception that ordinarily falls under the heading of touch. The above features of tactile perception do not all apply to the sensing of hot and cold that is physiologically connected with the organs of touch. Heat is physically related to tangibility, the resistant corporeity of things, for heat affects the cohesion and density of bodies.¹¹⁵ Unlike other tactile properties of things, however, temperature can be felt at a distance in virtue of some conductive medium of kinetic energy. Moreover, hot and cold may be felt with only momentary contact resulting from movement of either or both the individual and the touched object, or immersion in some encompassing medium, ordinarily gaseous or liquid. In neither case does temperature perception depend upon the dynamic time-series presentation applying to tactile perception. Perceiving temperature change is another matter, since it does depend upon a synthesis of prior and current sensations.

8.5.3 THE INTERSENSORY SYNTHESSES OF PERCEPTION

As Aristotle points out, the individual senses allow perception of properties that are exclusive to their own modality, as well as of other properties that are shared by some or all senses. Perception of color, sound, smell, and taste are specific to their respective sensory modalities, whereas movement, rest, number, shape, and size are perceived by several senses in common.¹¹⁶ The latter commonalities, of course, correspond to the “primary qualities” that early modern philosophers, both “Rationalist” and “Empiricist,” ascribed to physical objectivity in contrast to the allegedly merely subjective affections comprising “secondary qualities” specific to each sensory modality. The properties common to the several senses can count as “primary qualities” since they apply to matter as such, determined in terms of spatio-temporal parameters indifferent to what kind of thing a material body may be as well as to what import it may have. These properties are privileged by early modern philosophers owing to their reduction of objectivity to a mechanism governed by efficient causality, to the exclusion of formal and final causality and any objective realization of life or mind. Nonetheless, as Berkeley pointed out,¹¹⁷ the perception of these common properties depends upon perception of the exclusive, sense-modality-specific properties. Unless, for example, sight senses color and/or monochromatic light variations, there can be no visual perception of the movement, number, shape, or size of any thing.¹¹⁸ The properties common to several senses, however, cannot themselves be perceived unless mind is conscious of its different sensory modalities at once and connects the common properties and exclusive properties on which the former rest, thereby perceiving things uniting properties exclusive to different senses as well as properties shared by more than one.¹¹⁹

This does not depend upon the addition of any special sense, such as the “common sense” to which Aristotle sometimes refers.¹²⁰ Due to the constitutive centrality of sentient subjectivity, the sensations of all its sense modalities automatically fall within a single field of sensibility. This unification holds true in consciousness, as well as in the preconscious psyche and intelligence. Accordingly, perception is immediately in a position to associate sensations from different sense organs not just within their separate modalities, but also together so as to convey “intersensory” things. These are perceived to have a unitary physical being combining potentially visual, auditory, olfactory, taste, and tactile properties by which those things are perceivably interrelated. How many different sensory modalities are involved depends upon two coordinate factors: on the one hand, the physical perceivability of objects, which depends upon their own character and that of their surroundings in relation to their perceiver, and on the other hand, which operative senses the perceiver possesses, something conditioned by the individual’s species being, congenital endowment, health,

and incurred physiological damage. Whatever functioning sense organs may be at hand, all sensations from every one of these sense modalities fall within the unitary horizon of consciousness.

For this reason, there is no "binding problem," leaving in question how the different types of sensations can be perceived to be united as properties of the same thing. Consciousness need only engage in the same associative mediation it performs in uniting sensations of just one mode as properties of a single thing. All consciousness has to do is attend to sensations from the different modalities that all fall within its awareness and connect together some from one sense with those of another. Since these sensations occur both simultaneously and over time, the groupings and differentiations made by perceiving consciousness have both spatial and temporal extensions. Furthermore, these discriminations of intersensorial contents cannot help but reflect how the embodiment of consciousness renders sensations relative to the movement and orientation of the individual's body, which intersensorially perceives its own position, including the respective vantages of its different sense organs, as well as its physiological and psychological condition. In this way consciousness can begin to perceive the special role of its body among other objects by uniting the sensations that pertain to it in distinction from those that determine other things.

Intersensorial perception has been alleged to alter the character of the individual senses, as well as to insure objectivity for their perceptions of things, whose reality would otherwise remain in doubt. Berkeley argues in his *Essay toward a New Theory of Vision* that sight is only able to provide three-dimensional vision in coordination with simultaneous tactile perceptions.¹²¹ Deprived of touch, vision only perceives differentiations of dark and light, color, and shape, none of which can independently provide consciousness of objective distance on either a two- or three-dimensional field. The example of painting might suggest that vision immediately perceives a two-dimensional plane, to which experiences of movement may confer the illusion of depth. The visual manifold of light and color, however, cannot alone provide evidence of a flat plane as opposed to any other type of surface, nor of a three-dimensional expanse. Since the variegations of light and shade and differences in color may or may not fall on the same flat surface, visual perception leaves undecided all objective spatial relationships and cannot directly perceive an unambiguously two-dimensional field.¹²² Moreover, since the relative size and placement of visual sensations vary with the position of the viewer to the viewed, unless some independent distance determination is available, no objective sizes and extensions can be seen. Only when touch accompanies sight can visual differentiations be perceived to take on the objective depth that the exertions of touch and proprioception make tangible. The same can be said of hearing, for even if sounds may be differently heard by spatially separated ears, their difference in perspective is no more sufficient for perceiving

an objective three dimensions than that of stereoscopic eyes. The different views of the two eyes each present a visual surface, just as the discrepancies in volume and time in the hearing of a pair of ears present a pair of sound sensations whose overlap cannot alone convey anything spatial. In order for their correlations to convey spatial relationships, the relation between visual images and between overlapping sounds must have a separately perceivable spatiality of its own, such as the distance between eyes and ears.

Consequently, merely coordinating sight and hearing cannot independently provide spatial perception because the correlation of sights and sounds introduces no three-dimensional factor to anchor their respective variations. The same can be said of adding smell and/or taste to sight and hearing alone or together. Neither smell nor taste can pinpoint location by themselves or in conjunction with sight and hearing. Only touch and proprioception can supply what is needed.

Admittedly, when the perceiver is in motion relative to what is seen and heard, successive differences in the degree of divergence between what each eye and ear senses in different parts of their respective manifold may be correlated with differences in distance, relying simply on geometric triangulation.¹²³ Yet, that triangulation depends upon *already* perceiving the distance between the two eyes and the two ears in respect to something assumed to be distant from them on an extending plane.

Certainly, optical or auditory perspective depends upon locomotion, for one must be aware of how visual and sound displacements correlate with change in one's own position.¹²⁴ These displacements can be perceived by sight and hearing with the necessary contribution of memory to maintain the identity of the things (including the observer's own body) within the moving frame of reference. Yet perceiving these displacements is not equivalent to recognizing them as an experience of motion through three-dimensional space. Alterations of relative geometric location in the audio-visual field cannot themselves convey actual shifts of position by things, since they remain just changes on a visual surface and along a temporal series of sounds with fluctuating pitch and intensity.¹²⁵

Touch and proprioception, however, can provide tactile feeling of how one's body dynamically moves in relation to tangible things it encounters, securing an awareness of changes of one's physical location that are independent of sight and sound and not subject to variations due to differences in the relative position of perceiver and object perceived. Because tactile sensation occurs by contact and proprioception operates directly within the body, touch presents no problems of shifting perspective and varying distances between things sensed and sense organ. Instead, touch directly senses objective positions of the perceiver's own body and of the objects it contacts. Consequently, the felt effort and resistance of touch sensation render "relative motion . . . more than a shift of mutual

geometrical position."¹²⁶ Three-dimensional spatial relations can therefore become visible or audible when differences in the visual manifold of each eye and of the auditory manifold of each ear are found conjoined to changes in position perceived by touch.¹²⁷

This includes the kinesthetic sensations of an individual's own eye movements,¹²⁸ whether opening or closing the eyelids, turning the eyeballs one way or the other, or focusing in and out. Proprioception of even these small muscular movements adds to sight a physical depth orientation correlating the field of view with the sensed position of the viewer's body.

In every case, what makes touch perception the spatial anchor for the other senses is the dynamic interaction on which tactile sensation depends. Touch receptivity is tied to an active performance on the part of the perceiver, without which there can be no spatial organization of the sensible manifold into a world of tangible things in perceivable places. This active performance revolves around the self-movement of the perceiver, whose tactile proprioception and tactile perception of other things occurs through the relative motion and mutual pressure of the perceiver's body and other impacting corporeal entities.¹²⁹ Although this may involve contact with things that collide with the perceiver, unless the perceiver resists the impact and exerts enough control of his or her entire body to feel its own position as a whole, the spatial integration of itself and objects it contacts cannot be made. This is even true at rest, for so long as gravity is strong enough to be felt either kinesthetically or at points of contact between one's body and something else, some mutual physical resistance is at work permitting a sensing of spatial relationships.¹³⁰ When touch sensation is then accompanied by sensations at a distance (e.g., visual, auditory, and olfactory properties), the motion of the perceiver with respect to what is remotely sensed allows consciousness to perceive spatial relationships projecting beyond the immediate perceptions of position offered by proprioception and direct tactile contact.

Thanks to the dynamic interaction touch involves, the remotely perceiving senses (sight, hearing, and, to a lesser degree, smell) obtain the ability to perceive more than the three-dimensional location of things through the respective sense properties these senses register. The distance senses also become able to anticipate contact with things by apprehending the relative motion their touch assisted depth perception allows. In this way, perception can correlate the occurrence of remote sensations such as sight and sound with future tactual perceptions of things, whose time of encounter can be anticipated by apprehending the accompanying spatio-temporal bearings.¹³¹ Hence, the more theoretical senses can serve as a guide to action, even though they refrain from acting upon the things they perceive.¹³² Insofar as the real options for activity are bounded by how things offer varying resistance to an individual's movements, the anticipations of

contact and pressure by the remote senses best indicate the tangible possibilities of action.¹³³

An individual deprived of remote sensation, but endowed with touch, can still perceive the spatial reality of things by integrating the kinesthetic sensations of its own body orientation and movement with the tactile sensations of what it contacts. Although spatial perception can extend as far as remote sensations can reach when touch is combined with sensation at a distance, touch by itself does allow an individual to orient itself in the world within the limits of its own mobility. Nevertheless, because neither touch nor other sense modalities can perceive three-dimensional spatial relations without the dynamic interaction of the perceiver's body with tangible entities other than itself, a brain in a vat will be a dubious perceiver. This is not because the brain in a vat lacks a body, for the brain is an organic thing. Rather what it lacks is a body capable of any dynamic activity.

The dynamic interaction prerequisite for worldly perception may be intentional, but, *contra* Macmurray and Jonas,¹³⁴ willful movement is not required for an individual to perceive the spatial relationship of its body to other things. One may physically exert oneself involuntarily, resisting impacts without intending to do so, and still perceive one's own body position relative to other things. So too a dumb animal may move in a biologically purposive manner without deliberate choice and perceive things in space.

Nonetheless, insofar as spatial perception is required for any consciousness of worldly things, touch has primacy among the possible senses, as Aristotle maintains.¹³⁵ No other sense modalities can function as organs of sense-perception unless they are accompanied by tactile sensation and the proprioception with which touch is connected. Although individuals may be blind, deaf, and deprived of smell and taste and still perceive, they cannot be deprived of touch and proprioception and retain consciousness of external things.

It is, of course, difficult enough to imagine a human being, or for that matter, any other potential perceiver, who never possessed a sense of touch. The absence of any capacity to sense pressure and contact would certainly put life in jeopardy, hampering directed movement and metabolism.¹³⁶ Aristotle accordingly describes touch as the sense of nourishment, for nutrients can hardly be found and approached, seized, or ingested without some tactile sensation.¹³⁷ Moreover, deprived of touch, the individual is in constant danger of injury, as the effects of the partial numbing of leprosy make evident.¹³⁸ Yet even if extensive care might secure survival, could such an individual ever perceive a surrounding world of things? Could, for example, a purely visual experience allow for distinguishing between perceiving and imagining?¹³⁹ Or, more to the point, could any mind deprived of touch surmount the feeling of the psyche and become conscious of a tangible objectivity, with the physical reality of resistant

things? As Macmurray points out, consciousness of the resistant presence of any tangible other is not just a sense-datum passively received, but an active experience presupposing that the perceiver is doing something that can be resisted.¹⁴⁰ A totally passive mind, lacking an animated body, could never sense a resistant other, but without that real, dynamic opposition, the polarity of consciousness would not be perceivable. By providing *awareness* of contact, touch senses not just the body's encounter with some other tangible thing, but embodied consciousness's confrontation with its other. Without this two-sided sensing of contact, tactile sensation becomes reduced to a feeling, comfortable or uncomfortable, but oblivious to the opposition of self and other.¹⁴¹

If nontactile senses cannot perceive material things without the concordance of touch, the ability of touch to operate without any other sense modality suggests that perception need not be intersensorial. Yet this still leaves undecided with what objective authority consciousness can associate its sensations as properties of one thing rather than another thing, no matter what sensory modalities are at play.

8.5.4 THE LIMITS OF PERCEPTION

Despite all the very concrete conditions under which perception takes place, consciousness's unification of certain sensations into an awareness of things with sense properties secures a very limited objectivity.

To begin with, since consciousness perceives by grouping individual aspects of the sensuous manifold, the things that thereby get discriminated have sense properties that do not thereby figure as universals. The mere perception of things may demarcate different conglomerations of sensuous contents, but it does not represent any of these contents as a general representation inhering in a plurality of particulars nor as a particular subsumed under some universal. Nor does perceiving consciousness have any basis for differentiating any of the various properties it groups together as essential as opposed to inessential to the thing that has them. The sensuous contents are just qualitatively distinguished and referred to different underlying things to which they belong as distinct properties.¹⁴² The properties are merely other to one another, without being connected or demarcated by their own possession of common features that would render them instances of some universal, members of a class, or species of some genus. The things in question have, for their part, no other character than being what possess these selected sense properties. Each thing mediates these properties by comprising that in which they inhere, joining them objectively together in contrast to the subjective mental act that combines them without itself being an object of sense-perception.

The objective character of the unification of sensuous properties in the thing does not depend upon these properties being “intersensorial,” as Charles Taylor suggests, asserting that only multiple sensory modalities allow for any distinguishing between what a thing is and how it appears.¹⁴³ No “conformity” between properties registered by different senses can guarantee their objectivity, for the harmonious deliverances of disparate sense organs may be equally distorted or illusory.¹⁴⁴ Moreover, consciousness is in no position to determine whether the sight of something conforms to its touch on the basis of perception’s mere grouping together of sensuous contents. No quantitative congruence between properties of different senses will secure unity, for quantitative conformity still leaves the qualitative incongruence of their sense modalities.¹⁴⁵ Whether emanating from the same sense modality or from different ones, the properties of a thing remain just immediately joined together with no further principle determining their unification. What makes them properties of *a* thing is simply that consciousness apprehends them together in distinction from other contents of the sensuous manifold. Consciousness may have at its disposal a greater or smaller variety of sensory modalities owing to its species being, congenital deprivations, injury, or disease. Moreover, particular conditions may limit an individual’s employment of some of its modalities, leaving an individual with as little as just one sense organ with which to perceive. Yet even in the most restricted case where mind only has touch, consciousness can still perceive by grouping some sensations together and attributing certain feels to one thing rather than another. Whether or not sensations come in one or more sensory modalities, they all fall within the same sentient subjectivity, thereby forming the common field of sensation on which consciousness exercises its selective combinations and separations.¹⁴⁶

In every case, however, the thing to which the selected sensations are referred has no other perceived determination than being their unity. As such, the thing is a completely inactive substance, immersed in coeval relations to other such things, while wielding neither force nor self-activity.¹⁴⁷ Yet, if the substance of the thing provides no force to bind its features together, these are bereft of any unifying power on their part. Because the individual sensations are immediately manifold, their content is not sufficient to join them together. Nor can their spatial proximity, at one moment or over any duration, determine where one thing begins and ends. Nor can temporal relationships of sensations secure the unity of any things to which they putatively belong. Neither simultaneity nor continuous succession can preclude that different things are being sensed or that only separate sensations are being apprehended. Moreover, current or successive groupings of sensations can hardly dictate whether perceived things will themselves separate and combine, nor determine what makes any persist, instead of becoming supplanted by another.

The perceiver's body might seem to be a secure pole of enduring thinghood insofar as all perceptions remain relative to its orientation and movement with respect to other things, as well as to its sensing of its own bodily position and activity. This primacy, however, is specific to the body comprising a living sentient being with its own psyche and consciousness. The body's special centrality is not that of a mechanical system wherein solar, galactic, and intergalactic formations move themselves about their gravitational center, nor even that of the self-sustaining internal teleology of a living organism. The relationship of thing and properties to which perception is initially confined cannot capture the dynamic role of the body in lived experience. Even if the body actively conditions the entire horizon of perception, consciousness's combining and separating of sensuous content can only present objects with an identity consisting in having a plurality of given features whose unification has no further basis than being what the thing is to which they belong. This may allow consciousness to perceive its own body in its mere thinghood, but not to apprehend it as the body whose living sentience constitutively conditions the contents of experience.

Consciousness may find itself encumbered with drives and associated movements in response to the discrimination of things that perception provides. Moreover, these engagements of irritability may alter the field of perception in function of how the conscious individual interacts with its environment. Nonetheless, the perception of the relation of things and their properties cannot convey these dynamic interactions. To do so requires some understanding of the mechanism of force and its expression, as well as the internal teleology of the life process and the psychological reality of sentient, irritable subjectivity.

For this reason, perception cannot itself apprehend the affective relation of objects to the perceiving individual. In sense perception consciousness indeed apprehends things not merely as properties, as "such," but also as "there,"¹⁴⁸ as something given confronting mind. This "element of encounter"¹⁴⁹ has its own independent trace in the proprioception of the perceiver, who always senses some aspect of the dynamic relationship between the perceiver and the appearing world to which the perceiver belongs. Only on this basis do the sensed properties convey not just themselves but the affective presence of the things to which they putatively belong. Nonetheless, perception only rises above the self-communion of the psyche's self-feeling by abstracting itself from the affectiveness of its sensations to project them as objective determinations of a thing confronting consciousness. As we have seen, the physiology of the senses must permit sufficient disengagement from the causal interaction with the object so that one can perceive things instead of one's sensory affection.¹⁵⁰

Furthermore, to maintain that disengagement, consciousness must distinguish some persisting identity of things from mind's changing perceptions of them. Not only must each thing appear in a unified simultaneous manifold to

be perceived at any moment,¹⁵¹ but some abiding transformation pattern must be discernible in the continuous series of altering perceptions to maintain a recognizably enduring objective pole confronting the subjective unity of consciousness.¹⁵² Only under such a lawful unification can all the series of properties be held together in a nonarbitrary manner. Moreover, this enduring configuration cannot merely reside in the associating acts of consciousness. Instead, objects must be apprehended to have the power to unite their own altering properties in a persisting entity, as well as the power to affect other entities. Otherwise, the objectivity of things risks dissolving into purely subjective associating activities.

8.5.5 FROM PERCEPTION TO UNDERSTANDING

Without advancing to some awareness of dynamical realities underlying perception, consciousness remains afflicted by difficulties of discrimination that perception cannot itself resolve. Just as sensation is insufficient to know what it senses, so perception cannot certify the identity of the things whose properties it collects together. Each thing is just what has the properties by which it is perceived and those properties confront consciousness simply as particular contents of the sensible manifold on which its attention focuses. Consequently, what putatively possesses properties has no further perceivable identity to which those properties can be referred and consciousness has no *perceivable* ground for separating and combining its sensible manifold as it does.¹⁵³ Even if certain groups of properties may appear in repeated association, that can just as well occur if “objectivity” comprises merely a “a flow of sensed properties, and not of *things* at all.”¹⁵⁴ What here unites properties as belonging to a thing is simply the selective combination by conscious perception, which is not itself perceived. If mind were instead to focus upon its own mental activity as such, this would only undermine the *objective* unity of the perceived thing.

For this reason, as far as the evidence of sense perception goes, the sensible properties attributed to things can just as readily be independent, self-subsistent sensible matters whose combination in a thing is merely nominal, exhibiting subjective association rather than objective unity.¹⁵⁵ These sensible matters are distinguished from things insofar as they do not themselves comprise an unperceived substrate of sensible properties. Although they lack “properties” in this respect, these sensible “matters” can still be discriminated from one another without being united in a thing insofar as they involve the sensible singularity that feeling provides.¹⁵⁶ Their discrimination is just as much an immediate product of the act of perception as the combining of different “properties” into a thing.

Selectively perceiving distinct sensible factors as independent entities depends no more upon invoking any concepts and verbal descriptions than does

perceiving the thing as *having* its properties. We, the philosophical psychologist, may think the concepts of thing and property and of sensible matters, but perception does not itself involve the conceptualizations we perform in theorizing *about* perception. For perceiving consciousness, both “matters” and “properties” remain singular mental contents provided by sensation rather than general representations related to intuitions or signs.

For this reason, perception of sensible matters and properties can be engaged in by dumb animals and prelinguistic children. Awareness of things is not equivalent to identifying them under a description. Descriptive identification does require concepts and language. Perception, however, simply involves a preverbal focusing of attention upon aspects of the sensible manifold combined with the disengagement rendering the discriminated content an objective unity.

Perception’s preverbal combination and discrimination may not contend with the problem of establishing syntactical connections between words and things, but it remains burdened with its own difficulties maintaining the objectivity of its awareness of things. So long as consciousness remains restricted to perception, nothing can prevent its groupings of properties from giving way to a perceiving of independent sensible matters, which just as readily can revert to a perception of things if consciousness so focuses its attention.

To secure an abiding objective unity for the properties that compose the thing, the evidence of perception must be transcended by an understanding that there is a ground for their unification, a ground that is supersensible insofar as it underlies the sensible manifold from which properties are composed. This mental development from perception to understanding is immediately available to consciousness. All it need do is take as its object the efficacy exerted by its own perceiving activity and apprehend an unperceived substrate wielding the power of securing each thing’s possession of its properties and its interaction with other things. As we have seen, although consciousness *qua* perception connects some of its mental contents as properties of one thing rather than another, in perceiving things with properties, consciousness does not yet apprehend its own unifying activity. Instead, consciousness apprehends its objects as having a unity of their own as well as an objective interrelationship. To ground this apprehension, consciousness must do more than perceive collections of properties, which as such lack the power to collect themselves. Consciousness must further understand there to be a nonperceivable basis that posits distinct properties as determinations belonging to the same object and grounds the relations between these distinguished things. These perceivable groupings of properties are then the *appearance* of what underlies them and their connection. Taking what perception provides, but referring its connections to an inward, supersensible foundation, consciousness thereby understands appearance to manifest an objectivity governed by an underlying necessity.¹⁵⁷

8.6 Understanding

Sense-perception paves the way for conscious understanding of the objective grounds of appearance by leading consciousness to treat its own mediating activity as an objective force imposing the law by which sensible existence is governed. The unity of things and the interrelations among them now are understood to reside in the supersensible mediations that dynamically determine them. Consciousness thereby apprehends an objectivity whose appearance is perceived, but whose true nature is understood as the expression of forces, exerting the power to determine things in their interaction with one another. Forces' dynamic determination of the flux of sensible reality comprises an objective necessity, whose ordering is, as a whole, a natural law to which the manifold of sensation is subject.¹⁵⁸ On this basis, consciousness can now apprehend causal necessities at work in objectivity, saving the appearances by securing the objective unities and interaction of things.

These necessities exhibit efficient rather than formal, material, or final causality because they apply in the same way to all sensible things and their properties, while producing effects different from their conditions. Because the movement by which the properties and relations of things are combined and distinguished is wielded by a power indifferent to *what* things it orders, it is a common determining principle operating without regard to form or to species and genera. This indifference to content in the expressions of force equally precludes the self-realizations of ends, which result in the same contents prefigured as goals. Consequently, the necessity securing the unity and interrelationship of things is a lawful interconnectedness comprised of the blind force of efficient causality. Insofar as efficient causality is indifferent to form and import, it governs things solely in respect to their matter and its spatio-temporal alterations, that is, its motion.

8.6.1 CONSCIOUSNESS OF FORCE AND LAW

Conscious understanding confronts sensible appearance as a realm determined by a supersensible ground, necessitating the unity and relations of things. In so doing, consciousness apprehends objectivity to consist in the expression of forces. Instead of perceiving sensible reality as a free-standing *existence* of things that have properties by which they are interconnected, consciousness now understands the sensible world to be an *appearance* reflecting an underlying necessity.¹⁵⁹ As a world of phenomena, the spatio-temporal manifold of sensible appearance is unified by a power that does not itself appear, but is nonetheless

objective. This unifying power is a working of forces, which are not directly perceivable, but exhibit their efficacy in the dynamic relationships of objects comprising the expression of these forces.

Just as the thing is no more than the unitary bearer of its properties, so force is no more than the positor, the determining ground of the unity of things and of their interaction that compose the expression of force. Force and its expression have essentially the same content, but in different form. Force has no character of its own apart from being the determining source of its expression. The dynamic relationship of things, as the expression of force, is basically nothing but what force posits. Force and its expression are therefore identical in content, with the qualification that force is the immediate positing of that content, whereas dynamically determined things are that content as posited, as mediated. That is, force consists in nothing but altering the rest and motion of things, whereas those same changing motions of interacting bodies are the expression of force.

Yet since force consists only in positing its expression,¹⁶⁰ the supersensible ground of appearance contains in itself the phenomenal differentiations that derive from it. These differentiations are, after all, the supersensible ground's *own* determinings, for its very being as ground resides in them. Moreover, insofar as sensible appearance has a unity of its own, forces must together compose an equally unified supersensible ordering, that mediates all things in the same way. On both counts, consciousness confronts a common *determinate* necessity, ruling objectivity by an encompassing law applying to all objects irrespective of their qualitative differences, class memberships, and species beings. This law contains in its own specification the determinate distinctions exhibited in the dynamic process of phenomena. The governing law of appearance thereby subjects sensible things to an external order, allowing consciousness to understand objectivity as mechanical in character, involving material change that is determined from without with indifference to import and kind.

8.6.2 HOW CONSCIOUS UNDERSTANDING CAN BE PRELINGUISTIC

Although the associations and discriminations of perception can proceed without representing concepts and the linguistic competence that conceptualization involves, the understanding of appearance seems, at first glance, intrinsically bound to discursive rationality. After all, awareness of the expression of force and the lawful dynamics of appearance involves understanding something insensible to be ordering what is perceived. How can force and law be experienced without thinking their concepts, as well as employing the linguistic competence thinking requires?

If consciousness of any inner necessity required discursive rationality, dumb animals or prelinguistic children could never experience causal relations of force, nor act with any understanding of their own dynamic efficacy in response to the efficacy of other things. Yet, an understanding of dynamic relations is manifest in even the most basic behavior that animals exhibit in moving around their biosphere, fulfilling their metabolism and reproducing through the mediation of activity based on perception at a distance. Whenever animals emerge from sleep or rest,¹⁶¹ they cannot fail to exert themselves and experience their own wielding of bodily force as well as the resistance of reacting things. This experience can hardly remain just a receptive experience, for on every occasion of feeding, reproductive, and nurturing behavior, animals must understand how to contend with external forces by making an effort with causal consequences of its own. Even though all these animal functions involve teleological processes, they all involve realizing species specific ends by acting upon other objects, employing mechanical and chemical interactions. Consequently, the lawful force of efficient causality is always at work alongside the realization of ends. Dumb animals and toddlers may not *conceive* or *describe* the necessity of such force and law, but their adaptive know-how shows a pretheoretical understanding of causal connection.

This understanding is implicit in every effort an animal feels itself making in overcoming the resistance of worldly matter to its action or in resisting the impact of tangible things upon itself.¹⁶² Without thinking any concepts, an animal can experience force and efficient causality by conjointly sensing its body's own movements, feeling pressure on its bodily surface, and perceiving the relative presence of its body and other things in its environment. The resulting experience of force is not itself a perceived content, for as Hume understood, what is perceived cannot count as an expression of force just on the basis of its thinghood.¹⁶³ Just as the joining of sense data into a thing is not itself a sense datum, so the dynamic connection of things is not itself a thing.¹⁶⁴ Consequently, force and causality cannot be apprehended as a perceived datum, but can only be apprehended as an "actum," directly "experienced from within when exerted or suffered."¹⁶⁵ This "actum" is not just "humanly" present in effort, as Jonas describes it,¹⁶⁶ but more generally present in any animal's own exertion. Since that "actum" is inextricably connected to forceful action and reaction by other things, experiencing one's effort just as much involves experiencing a dynamic nexus that consciousness confronts extending across its phenomenal environment.

To the extent that the understanding of force and causal necessity is rooted in the experience of effort, consciousness could never be aware of dynamic phenomena without a body, and more specifically, without a proprioceptive *animated* body, *exercising* its sentient irritability.¹⁶⁷ Understanding therefore involves experiencing one's body as a dynamic factor, objectively exhibiting the

power that consciousness subjectively wields in uniting its manifold into a world of phenomenal things.

Moreover, to the extent that “learning from experience” minimally involves apprehending causal relations employable in future activity, Popper is right to maintain that organisms can learn from experience only if they are active.¹⁶⁸

8.6.3 DYNAMIC CONSCIOUSNESS AND THE INDIVIDUAL SENSES

The individual senses with the most “practical,” immediate engagement with objectivity are crucial to the consciousness of force and law. Touch, together with proprioception of body movements, plays a key role, both by itself and in combination with more “theoretical” senses. Dynamic relationships can be directly experienced in the expenditure of effort against resisting objects. That effort and resistance, however, cannot be felt without touch and proprioception of bodily actions. Hearing and vision can contribute to experiencing dynamic, causal interaction, but they can only provide three-dimensional perception of things being lawfully affected by force if sounds, visual cues, or, for that matter, smells and tastes, get associated with the spatial orientation of the body as it moves and acts in relation to its environment. Otherwise, neither objective movement nor expressions of force can be apprehended, in which case dynamic relations cannot be experienced.

Consequently, no individual originally deprived of touch can experience any causal efficacy in the things it perceives. Although sense organs that allow perception at a distance may extend the experience of force and law to the most remote extremes of perceivable nature, someone with only a sense of touch can still apprehend the expressions of force and lawful dynamics and navigate the proximate world with some degree of know-how.

8.6.4 THE LIMITATIONS OF CONSCIOUS UNDERSTANDING

Understanding the appearance of force and law cannot provide consciousness with comprehension of any of those aspects of living individuals and their biosphere that are not just mechanical, but biological, as well as psychological in nature.

Consciousness as understanding can experience the working of external forces upon its body and of its body’s own efficacy upon other objects. Conscious understanding, however, can thereby no more experience its body as alive as apprehend other things as living organisms. Life, being both end and instrument of its own

self-sustaining process, ordering itself internally while resisting determination from without, has no place in the rule-governed objectivity to which conscious understanding gives itself access.¹⁶⁹ Consequently, so long as consciousness remains restricted to awareness of forces and their expressions and of the supersensible lawfulness uniting such a world of appearance, consciousness cannot experience *objectively* how it has a *living* body of its own, how its embodiment is sentient and irritable, or how anything else in the world can be animated. Since mind cannot be apart from animal life, it follows that such conscious understanding lacks a fundamental stepping stone for becoming self-consciousness or conscious of any other conscious individuals.

That stepping stone, however, is not beyond reach of consciousness. Most early modern philosophers from Descartes through Kant have led us to believe that it is unattainable, despite their common presumption that consciousness can still be self-conscious as well as conscious of other conscious selves, such as those they address in their philosophical discourses. What these thinkers fail to recognize is that consciousness can have life as its object precisely because the life process of the conscious individual provides mind with sufficient resources to become aware of living subjectivity. To experience life, mind need only take the animate spontaneity of its own understanding and project it as something objective, informing the material of sensible perceptions, and thereby fitting the self-organization already at hand necessarily in its own embodiment and in the reality of other living things inhabiting its biosphere.

The impulse to do so is inherent in the efforts of understanding. Consciousness understands the dynamic interrelationships of existence by referring the sensible features of things to underlying forces, whose unity comprises the lawful ordering of appearance. Yet the sensible features themselves remain contingent with respect to these forces, whose expression does not account for the complete detail of what is perceived. Force and law do not determine exhaustively the phenomena they ground, but merely posit their position and movement. For this reason, the relationships of the understanding can be *schematized* in terms of spatio-temporal relations, as Kant proposed.¹⁷⁰ Efficient causality can be experienced in the lawful temporal succession of appearances, just as reciprocal interaction can be experienced in their order-indifferent succession.¹⁷¹ Nevertheless, the sensuous properties of objects, regarded as secondary and merely subjective by the Empiricists, Rationalists, and Kant alike, remain undetermined by force and law, even though the latter's expression is perceivable only through these sensible features.

The objectivity of phenomena can be understood to be exhaustively determinate, however, if the inward dynamic of the object necessarily differentiates itself so as to encompass the totality of its appearance. That outer totality will be thoroughly encompassed insofar as its differentiation just as much comprises the

inner identity of the object, overcoming the indifferent externality of material bodies to the forces that govern them. For this to occur, conscious understanding must bring the “self-existent inner being” of objectivity to appearance, apprehending phenomena to have their ground within themselves, as fully actual, self-sustaining entities.¹⁷²

The resulting thoroughgoing unity of inner and outer is constitutive of life. Unlike an artifact, whose form leaves unspecified everything individual about its embodiment, the living thing’s organic unity actively engenders both its “matter” and “form,” entailing organs that sustain not only the functioning of one another, but also the entirety of their existence, enabling one another to grow, repair, and rejuvenate their living substance. Once consciousness takes this unity of inner and outer as its object, it comprises an awareness of life.

8.7 Consciousness of Life

Consciousness of life involves a threefold apprehension. To begin with, it entails apprehending objects that are self-sustaining and self-ordering. Secondly, it involves distinguishing living things from inanimate objects, which are entirely subject to the external necessity of natural law. Finally, it involves apprehending one’s own body as sentiently alive in distinction from other living things, which may or may not be animals.

That these apprehensions need not entail *conceiving* internal teleology or *describing* life processes is evident by how widely dumb animal behavior discriminates living things from inanimate objects, as well as animals from plants. Whether stalking or taking evasive action, animals clearly distinguish their respective animal prey and predators from plants and nonliving things. Indeed, both predator and prey will employ stealth and camouflage to impede consciousness of their animal being by others. Similarly, whenever animals mate or nurture offspring, they show an awareness distinguishing other animals from plants and inanimate objects, as well as from animals of different species and parentage. Otherwise, the very survival of any animal species would be in jeopardy.

An analogous consciousness of life seems attributable to preverbal children whenever they behaviorally differentiate parents, siblings, playmates, and pets from the plants, artifacts, and other inanimate objects around them. Although young children may not have a firm understanding of the boundaries between living and inanimate things, their actions make clear that they continually draw a distinction.

To be conscious of life hardly requires thinking concepts of organic unity, metabolism, or reproduction any more than being conscious of animal life requires thinking concepts of sentience and irritability. It instead involves apprehensions,

some of which apply to plants as well as animals, and others which apply exclusively to animals. Without thinking the concept of life, consciousness can apprehend life by experiencing an entity (1) having an organic unity exhibited by how its parts degrade upon their separation in a way incommensurate with nonliving matter, (2) undergoing spontaneous growth as an integrated whole, rather than as erupting lava, heaps of sand, cloud formations, or crystal outcroppings, (3) exhibiting tropisms, manifesting local reactions to stimuli directed to sustaining the organism, and (4) reproducing by giving rise to species-related individuals from seeds and the like. On the other hand, specifically animal life is very readily apprehended by experiencing objects with the distinctive features of sentient irritability. Animal behavior manifestly operates in function of the appetites and perceptions of the animal, which all exhibit species specific features distinguishing the subjectively centralized reactions of tigers, robins, lizards, and guppies from one another, as well as from the localized tropisms of plants or the blind results of mechanical impulse. In each case, life can be experienced by attending to the appearance of life processes in another organism, as well as by observing them in consciousness's own body as felt and perceived.

Unlike consciousness of mechanistic process, which involves spatio-temporal functions indifferent to the nature of dynamically interacting objects, consciousness of life depends on more than functions of the *relationships* of perceptions. Because the nature of living organisms is essential to their activities, conscious apprehension of life involves awareness of the qualitative continuities of their internal teleology. Although this requires understanding concrete relations of perceptions exhibiting the concepts of plant and animal existence, the resulting consciousness is not equivalent to having theoretical knowledge of botany and zoology. Theorizing about plants and animals requires employing words to think concepts under which observations can be subsumed. Conscious understanding of life can apprehend its perceptions through functions whose conceptual unities are not themselves explicitly expressed or known. To make these concepts objects of awareness, mind must first intuit, represent, and signify, all of which require apprehending mental contents not just as determinations of objects, but as determinations both subjective and objective.¹⁷³

8.7.1 CONSCIOUSNESS OF ANIMAL LIFE AS A PRECONDITION OF SELF-CONSCIOUSNESS

Consciousness of animal life brings mind to the threshold of having an object in which consciousness can become aware of its own subjective standpoint.¹⁷⁴ This is because among living things, only animals can sense, perceive, and understand. Hence, once mind becomes conscious of other animals, it apprehends

an object that can experience other sentient beings as well. Then consciousness can be conscious of another animate consciousness whose awareness may reflect that of the former. In this way, consciousness could become conscious of itself in being aware of another consciousness. How this can occur is part and parcel of conceiving self-consciousness proper.¹⁷⁵

CHAPTER 9

Self-Consciousness

No topic of philosophical psychology appears less problematic or more inescapably accessible than self-consciousness.¹ Without being self-conscious, one can hardly undertake any inquiry, for how can knowledge be sought if one is unaware of oneself engaged in that quest? Moreover, self-consciousness seems to escape the epistemological uncertainty afflicting consciousness of anything else. Consciousness of other things is always plagued with knowing something whose existence cannot just lie in the awareness of it. As Descartes observed, whenever one represents an object different from one's consciousness, whether that object exists or corresponds with its representation is always doubtful, since merely being conscious of it cannot preclude an illusory or inaccurate apprehension.² By contrast, insofar as consciousness of one's consciousness is the very being of self-consciousness, no gap between object and representation here seems possible. Not only is my representation of myself as conscious constitutive of my being self-conscious, but nothing prevents that representation from corresponding to what it is about.

9.1 The Problem of Self-Consciousness

Privileging this certainty, however, generates skepticism regarding knowledge of anything other than one's own consciousness, including other minds. If self-conscious knowledge of conscious is secured by a unique identity of subject and object, of knowing and what knowing is knowing of, wherever that identity is lacking cognition confronts an insurmountable gap if knowing has no access to its object other than by representing it.

The solipsism looming from the privileged certainty of self-consciousness is not deflected by the commonly claimed dependence of consciousness upon

self-consciousness. As Kant would have it, consciousness of any object is only possible if consciousness relates itself to its own representation of the object. Otherwise, the putative knowledge belongs to no mind and there is no consciousness of the represented object. *If* this relation of consciousness to its own representation is self-consciousness, then there can be no consciousness of an object without a simultaneous self-consciousness.³ By the same token, self-consciousness would have to be ascribed to the psyche, for if the psyche's self-relation to its own feeling *is* self-consciousness, no feeling could be felt without it. Such dependency leaves the psyche unable to provide the psychological preconditions of consciousness, while importing within the self-communing of the psyche the subject-object polarity of consciousness, preventing feelings from being discriminated from sensations.

Even on its own terms the alleged dependency of consciousness upon self-consciousness fatally undermines the opposition of consciousness it intends to ground. The privileged certainty of self-consciousness renders suspect whether consciousness can ever relate to anything but itself. So long as self-consciousness is considered primary, it remains doubtful whether there can be any consciousness of a nonself to accompany self-consciousness. In that case, mind reverts to the self-communing of the psyche, where there is no objectivity confronting awareness.

This leaves the solitary primacy of self-consciousness just as questionable as *how* consciousness can be self-aware. Self-consciousness must presuppose consciousness if to be self-conscious is to be *conscious of* one's consciousness. Then consciousness must already be present, relating to an object it distinguishes from itself. This is why consciousness must be both conceivable and realizable prior to and apart from self-consciousness. Just as the psyche only feels feelings by relating to itself in its mental modifications, consciousness only apprehends an object by relating to its own mental content. To have intentionality, to be about something objective rather than subjective, consciousness must treat its own mental content as the determination of something independently given from which consciousness is disengaged. Without disengaging itself from the same content to which it stands in self-relation, mind reverts to a preconscious psyche that feels nothing but its own feeling self, never attaining the subject-object opposition of consciousness. The relation of consciousness to its own mental content is therefore not equivalent to consciousness *of consciousness*. Consciousness's relation to its own representation is only *part* of consciousness, a part that must be accompanied by a relation to that content as something *other to* consciousness. Accordingly, consciousness does not collapse into self-consciousness and there can be consciousness without self-consciousness, providing the object of which self-consciousness should be aware.

Nonetheless, because mind is conscious of something other than itself only by detaching itself from its own mental content, consciousness is no more pri-

mary than self-consciousness. Just as self-consciousness depends upon consciousness to be the object of its own disengaged awareness, so consciousness depends upon the disengagement by which self-feeling becomes sensation of something objective.

This double dependency precludes Cartesian solipsism. Insofar as self-consciousness presupposes consciousness, which presupposes the preconscious psyche, self-certainty cannot be apart from certainty of something not the self, namely, an object.

Given the animal embodiment of mind and the relation of psyche to consciousness, conscious awareness of a nonself involves much more than just what is logically other to the subject. Self-consciousness's dependence upon consciousness has further concrete implications, indicated in part by parallel arguments of Kant and Strawson.

Kant's famous "Refutation of Idealism" in the *Critique of Pure Reason*⁴ upholds the dependence of self-consciousness on consciousness by focusing on how the temporal succession of conscious awareness cannot lie merely in consciousness of one representation following another. To be conscious of any representations in temporal succession, something must be given to consciousness as a persisting backdrop, enabling apprehension of the continuity of time. Mere repetition of the same content in different representations cannot secure temporal unity. No matter how instantaneously mental contents vanish nor how much recurring detail they contain, none represent their temporal interconnection in the stream of consciousness. Nothing *in* any mental content can bridge the ceasing to be of one and the coming to be of another. Temporal awareness requires something that persists independently of the flow of representations, something reidentifiable from one moment to the next, even if only through the mental contents of consciousness. Consequently, consciousness cannot apprehend the temporal sequence of its own representations, unless they allow mind to be aware of something persisting in space, that one abiding framework independent of mental succession. Without consciousness of objects in space, consciousness has nothing enduring external to the succession of representations by which to tie one perceived moment to the next. Individual objects may come and go, but the spatial context itself must be apprehended to persist if temporal continuity is to be perceivable. Since self-consciousness is aware of temporally successive mental contents within its one consciousness, there can be no consciousness of self without awareness of spatial objectivity. Accordingly, self-consciousness must always involve consciousness of not just a nonself, but a spatial object.

Kant develops this argument without taking account of the necessary embodiment of mind, which itself guarantees that consciousness of body and biosphere will always be close at hand. Indeed, even when individuals lack sensations of external things, they will still have feelings of their own body to provide

a backdrop for internal time consciousness. Yet, that Kant's argument abstracts from these consequences of embodied mind only makes all the more potent the claim that self-consciousness must be accompanied by spatial consciousness.

Strawson buttresses the same conclusion by providing an indirect proof, showing how a "no-space world" is insufficient to attribute representations to one consciousness or to objectively identify particulars.⁵ Taking a mind with only auditory sensation to lack spatial perception, Strawson uses this case to explore whether any mind unconscious of space can still identify objects and retain its unity of awareness. Crucial for identifying objects is the ability to distinguish objects from the representations of them, without which no move can be made from the self-feeling of the psyche to the disengaged opposition of consciousness. The differentiation of object from mental content requires some way of apprehending objects to exist even when they are not being represented. Doing so goes together with being able to reidentify an object through representations separated by an interval in time. Otherwise, no previously apprehended object could be perceived to persist in distinction from recurrences of its representation in mind. None of this can be accomplished with the space-deprived representations of solely auditory consciousness. No matter how sounds be sequenced or how a continuous "reference tone" modulates in accompanying sounds that do or do not resemble one another, consciousness can never thereby certifiably distinguish any enduring objects from the sounds it hears. That a sound similar to one heard before some interval is accompanied by a certain modulation in the continuous background tone hardly insures that something exists during that interval, or that recurring sounds indicate the same persisting object. Temporal relations by themselves cannot give mental contents any identifiable objectivity. Since self-consciousness depends upon consciousness of an object, temporal relations will equally fail to provide the unity of consciousness allowing all mind's mental contents to be attributed to the same awareness. No ordering of sounds in time can independently insure that they are all perceived by one consciousness, rather than being differently distributed among the auditory perceptions of many others.

The convergence of these problems of objective identification and conscious unity suggests something at the heart of Kant's transcendental deduction: that the conditions for any object being given to consciousness are equally the conditions for the unity of representations in one consciousness, without which self-consciousness is impossible. Kant's transcendental deduction imputes those conditions to the necessary connection of representations under concepts in judgment, thereby tying consciousness of objects with the unity of apperception. Significantly, the parallel arguments of the "Refutation of Idealism" and Strawson's "no-space world" do not appeal to concepts and judgment, which would require invoking linguistic intelligence. Instead, they offer something else

that can be common to the consciousness of dumb animals and prelinguistic children: the *spatio*-temporality of objectivity. Only insofar as consciousness is aware of an objectivity determined in space as well as time can its successive mental contents be united in one consciousness, and this can occur prior to discursive intelligence, even if Kant and Strawson may neither notice nor accept that possibility.

This linkage between awareness of spatial objects and the unity of consciousness may secure the dependence of self-consciousness on consciousness, as well as allow for both without linguistic intelligence. It does not, however, establish how self-consciousness is possible. Consciousness may be one in being aware of an object in space. Yet mind's relation to its own mental content as determinative of a spatial objectivity it confronts is not equivalent to self-consciousness. Like the preconscious psyche that feels its own feelings, consciousness here has access to its own mental content. That, however, does not render conscious awareness, with *both* its self-relation and relation to other, itself an object for consciousness. To be conscious of itself, mind must be conscious of an object and have *that* consciousness as *its* object. This involves distinguishing between object and subject, while still enabling the subject of consciousness to confront itself as an object. Although conscious awareness of objects in space may be necessary for self-consciousness, it is thus hardly sufficient.

9.2 Consciousness of the Self's Body and Self-Consciousness

Nevertheless, the irreducibility of consciousness of spatial objectivity might suggest that self-consciousness is achievable, at least in part, through consciousness of mind's own living body, that particular extended object to which the subject of awareness is specially connected. Such privileged connection is already accounted for by the necessary animal embodiment of mind and the physiology of its sentient irritability. The self-feeling of the psyche already exhibits that connection, as does every engagement of sensuous consciousness, perception, and understanding, which always bear the imprint of the living, active standpoint from which awareness emanates. Self-consciousness seems readily explicable through these relationships, *provided* mind's awareness of its body can manifest to consciousness its own awareness. If the intrinsic connections between consciousness and its body can become objective for consciousness, then not only will self-consciousness be established, but knowledge of and interaction with other minds will become one big step closer.

Admittedly, even if self-consciousness depends upon awareness of one's body, consciousness of spatial objectivity could still be unaccompanied by self-consciousness. Namely, one could be aware of objects in space without perceiving one's body or be conscious of one's body without recognizing it to be in any special relationship with one's awareness. These possibilities would only be removed if consciousness necessarily involves awareness of not only spatial objectivity, but the subject's own body in its unique position within that world and in its unique relation to the subject's consciousness. Then not only would consciousness and self-consciousness go inextricably together, but the self of consciousness would necessarily have a tangible individuated reality observable as such by itself and potentially by others. Since one's body is situated among other objects in space and time, self-consciousness via awareness of one's embodiment would include consciousness of its relations to other physical objects. Consciousness of oneself as embodied would thereby be accompanied by consciousness of a physical nonself and the concrete relationships endemic in one's biosphere.

Introspection may empirically confirm such connections, but observation cannot establish their necessity. Given the animate embodiment of mind, one will always find oneself aware of one's body in some way and encounter others reporting similar testimony. Yet neither *experience* can guarantee that linkage for all past or future occurrences, nor determine what enables any consciousness to recognize its body as its own. If there is any necessity to consciousness of one's body, let alone as a constitutive ingredient in self-consciousness, it will rather be exhibited in how essential aspects of consciousness are impossible without it.

The development of the psyche and of the forms of consciousness from sensuous awareness to understanding all reflect one feature underlying any consciousness of one's body: that any receptivity depends upon having a body through whose sensory apparatus sensations of objects can be given. For this reason, all perception reflects the spatio-temporal orientation of the body's sense organs, as well as their health and genetic constitution. As we have seen, consciousness never just relates to its own disengaged awareness in being aware of its representations, but always encounters the mark of its own body in the view it has of the world.

This physiological embeddedness of perception is not challenged by the lack of any necessity for specific senses and their organs. *What* sensory apparatus underlies receptivity is contingent upon a mind's species being and personal physiological history, even if, as Aristotle maintains, no other sense organs can function without the sense of touch.⁶ However contingent sensory configuration may be, consciousness must have *some* sense organ, whose situation conditions whatever experience can be had.

Kant's account of the "Analogies of Experience" makes this manifest, even though he neglects to address explicitly the role of consciousness of one's body.

In the analyses of the second and third analogies,⁷ Kant points out that the order of perceptions cannot be a matter of indifference in experiencing successive events, since otherwise nothing could distinguish a subjective series of imagined representations from an objective succession of observed occurrences. He cites how, for example, if a boat is traveling downstream, observation of it upstream must precede observation of it downstream. This presumes, however, that the observer has a recognizably continuous vantage point in space time, without which the unity of the event could hardly be perceived. An analogous involvement of a situated standpoint underlies the contrasting experience of coexisting objects, whose order of perception is arbitrary. As Kant notes, it does not matter whether one first observes the front or back of a room so long as both coexist. This order indifference in perceiving coexisting objects presupposes, however, the possibility of alternate viewing directions, which depends on consciousness having an animal embodiment providing a unique vantage point that can be altered at will.⁸ Moreover, which perceptions can indifferently precede or follow one another depends upon what spatial orientation the observer takes. Because each change in orientation is connected to its predecessor by successive movements, observation of *them* is not order-indifferent. Indeed, only when consciousness remains located where objective alterations are perceivable and orients its sense organs accordingly can the unfolding of any event be observed. Naturally, any change in view will occur in time, involving the corporeal movements altering the orientation. To perceive how all these alterations of view are related to bodily movements, consciousness must be aware of its own situation in time and space, which, of course, depends upon mind's unique embodiment.

Yet how is consciousness able to recognize its body and how it positions consciousness's own perception? The embodiment of mind does mean that the orientation of perception is perceivably connected to how the body is uniquely positioned. At the very least, this renders consciousness always potentially or actually conscious of how observation is relative to one perceived object (mind's own body), on whose orientation and condition the field of perception depends. But does awareness of this relationship enable consciousness to recognize this privileged object as its own body and all its perceptions as its own? These recognitions go together, for unless consciousness can be certain of this object as its own unique body, it cannot claim exclusively the perceptions that are all relative to the situation of this body.

The road to self-consciousness must be found elsewhere, for reflection on the connection of perceptions to a perceived body cannot alone unite them in one consciousness. As Strawson observes, even if all phenomena are perceived to be relative to the location and condition of one object in the perceptual field, the various perceptions might still belong to different minds which alternately

receive successive situated perceptions.⁹ Since these minds would then share the same body, they could not be individuated by that connection.

The difficulty cannot be removed by focusing attention on the connection between the field of perception and the intentions and perceived behavior of mind's body. Just as force is apprehensible through the "actus" of effort and resistance, so consciousness that one animates one's own body rather than another may require perceiving how observed corporeal movements correlate with mental contents such as desire, impulse, and intention. To do so depends upon one and the same awareness possessing the correlated internal and external observations at each moment and in succession. This encompassing awareness cannot, however, be *instituted* by any relation between inner intentions and bodily behavior. Rather, connecting both pairs of observations presupposes the unitary awareness that carries out the connection. As Kant emphasized, any synthesis rests upon a unity of awareness to effect and contain it. Thus, consciousness cannot correlate intention and action unless it already comprises the awareness in which intention and observed action both fall and it recognizes that intention as its own.

How, then, is this unity of an embodied awareness possible? As a living self, consciousness may always involve awareness of physical objects and of the one body to which its conscious horizon is uniquely connected. What, however, enables mind to be conscious of its exclusive possession of these so situated mental contents? The concrete context of the question suggests the answer, for if the unity of awareness depends upon consciousness of a body of which consciousness must know itself to have exclusive possession, then self-ascription of one's mental contents to that body can no longer be problematic.

The proper bases for such dependence have been advanced in parallel by Merleau-Ponty and Strawson.¹⁰ Following Hegel's insight that the unity of consciousness is essentially individual, they recognize that consciousness cannot be one unless it has an individuation enabling it to both be distinguished and distinguish itself from any other mind. Furthermore, both recognize that consciousness cannot be individuated without standing in exclusive relation to a unique body. Mental contents cannot be connected to one awareness unless that awareness has an identity all its own. Unless it is individuated, no contents can be ascribed to it as opposed to any other standpoint. To be one, consciousness can therefore not just be a consciousness in general. Instead of being merely an undifferentiated particular, consciousness must be an *individual* consciousness. Lacking individuality, consciousness can no more identify itself than be identified by others. That individuality cannot be based upon any particular array or succession of mental contents for the simple reason that what is in question is whether they all belong to one mind. Their unification in one consciousness therefore must lie in something other than their own content. What supplies the

foundation of their unity is the concrete embodiment inherently individuating the living mind.

Since without this individuating embodiment, no unity of consciousness is possible, Merleau-Ponty and Strawson are correct to take this concrete reality of mind as primitive, provided the embodied individuation of consciousness is acknowledged to already involve the specific mind/body unity of the psyche, from which the opposition of consciousness emerges. Properly speaking, the "concrete person" is not just conscious, but a self-feeling psyche, potentially intelligent as well. In any case, "pure" consciousness, such as entertained by Descartes and Kant, is a derivative abstraction, whose disembodied awareness presupposes the concrete person of the living mind.¹¹ For this reason, when Kant presents the "I" as something at least potentially accompanying all representations as a condition of their unification in one consciousness, he must offer it as an empty "thought," lacking any individuating content.¹² Without any connection to a body, the "I" is merely an apperception in general, indistinguishable from any other.¹³ Contrary to Kant's supposition, the possible accompaniment of all representations by that thought cannot suffice to unite them in one identifiable awareness.

Descartes, despite himself, exhibits the same limitation when meditating upon the "I" as a "thinking thing." Although Descartes here addresses other interlocutors, he reflects upon the "I" as something completely isolated from any others. That isolation is inescapable, for any relation to others would introduce a contrastive differentiation of minds, requiring that each "I" cease to be merely a "thinking thing" and instead obtain an embodiment permitting individuation.

Accordingly, the emergence of self-consciousness is predicated upon mind having an individuated life in space-time, excluding everything else from its unique embodied situation and life-history. The consciousness which self-consciousness must take as its object is thus no "pure" awareness, but a concrete living individual with its own itinerary in the world.

Nonetheless, consciousness of individuated consciousness is not equivalent to mind's consciousness of its own body as something it uniquely feels and controls. Consciousness of one's body may require distinguishing it from other things, including the bodies of other persons, but observation of one's body is hardly an apprehension of one's *awareness* of one's body or of any other object. Admittedly, to perceive one's body as something one moves and proprioceptively feels requires awareness of feelings and drives and of their connection to one's body. Yet to comprehend these feelings and drives as one's own is still not equivalent to having one's consciousness as an object. This is evident in how feelings and drives already figure within the self-relation of the psyche, without involving consciousness, let alone self-consciousness.

Moreover, self-observation is not equivalent to self-knowledge.¹⁴ One may perceive one's own body, understand its dynamic relations, and recognize one's

being alive, yet still not know that one is a conscious individual, nor have any *self-conception*. This is true even when self-observation extends over time and is supported by memory. Memory may be crucial to self-awareness, since observed states of oneself can no longer be apprehended as one's own if memory of them is irretrievably lost.¹⁵ Yet, memory is not sufficient to identify the continuity of observed states as those of one's consciousness unless the recollected experiences are recalled by an individual who is aware of being the self-same mind engaged in recollection. That awareness cannot consist in any continuities of perception, for as Hume duly recognized, the self of consciousness is never just a datum of its own experience, but the subject that has the experience.¹⁶ Although this does not reduce the self to a bundle of perceptions, it does signify that self-consciousness involves more than "self-observation." To be conscious of oneself, one must somehow have as one's object the self-related mental activity characteristic of consciousness.

That this involves much more than self-observation is shown developmentally by how infants can and must come to distinguish what belongs to their body from what does not before they can discover that they are a self.¹⁷ As Popper observes, only when the child becomes conscious of its body in distinction from other things and takes it in observable control can the child begin to act on its desires in face of worldly resistance, rather than respond just by instinct or habit. Doing this may require a unity of awareness, but it need not involve having consciousness as an object. For this reason, many dumb animals can be conscious of their own bodies, have memory, and control themselves, yet lack consciousness of self,¹⁸ as exhibited in their inability to recognize their own reflections.

This lacking self-consciousness might be thought to rest upon an inability to think the concept of the "self" and to learn and employ a name of one's own. Children learn to use their own names in connection with the continuity of their bodily existence¹⁹ before being in a position to conceive selfhood. This developmental order is intelligible insofar as producing and recognizing signs for a representation can be done on the way to acquiring full-fledged linguistic competence and discursive rationality. Yet, if using signs for oneself is a precondition for becoming self-consciousness, then semiotic imagination and the beginnings of linguistic interaction would have to precede self-conscious awareness. That would present a conundrum, since sign production, recognition, and communication could hardly progress if individuals could not already be conscious of themselves in distinction from things and other interlocutors. This is one more reason why self-consciousness must be possible without mind having to think a *conception* of the self.

Empirical evidence for such a nondiscursive self-awareness is suggested by the examples of chimpanzees, whales, and even octopi that all appear to recog-

nize themselves in mirrors, as well as by all those animal behaviors where brutes seem to recognize and conform to the particular status they win in the hierarchy of their animal community.²⁰ Yet the question remains of how such nondiscursive self-consciousness is constituted.

9.3 Consciousness of Others and Self-Consciousness

The concrete embodiment of mind in the animal organism may serve to individuate consciousness, but, as Strawson observes, individuation presumes the possibility of a plurality of particulars without which nothing universal can be ascribed to a subject.²¹ Of itself, however, that possibility does not mandate that mind can be conscious only insofar as it relates to others. Whether or not consciousness actually coexists with other minds and is aware of or interacts with them, it always retains its unique embodiment. For this reason, a consciousness that finds itself alone, either intermittently or for good, does not relinquish its concrete identity, even if it were the last mind left in the universe.

Still, can consciousness be self-conscious without at least *having been* conscious of other selves, if not now aware of another? What remains to be resolved is something the primacy of embodiment leaves unanswered: how *is* mind self-conscious, given its living being in the world? Consciousness may not be possible without being embodied, but what still needs clarification is how consciousness recognizes itself *as an object* and whether this recognition in any way depends upon relation to other minds.

Wilfrid Sellars and subsequently Donald Davidson have argued that self-consciousness cannot be without consciousness of objects and of other conscious minds. These three forms of consciousness are inextricably connected due to the alleged tie between knowledge and consciousness and between knowledge and linguistic intelligence. According to this understanding, consciousness knows its objects, and this knowledge involves truth claims, which always have a propositional form in which individuals are determined through concepts. Concepts and propositions cannot be represented without language. Language however, cannot be private, but always involves interaction between members of a linguistic community. Accordingly, the knowledge of consciousness must always involve linguistic intelligence and the interrelation of a plurality of interlocutors, on which language and thought rest. Moreover, meanings get fixed in linguistic interaction through a triangulation wherein individuals observe one another using common expressions to refer to commonly observed objects. Consequently, knowledge, depending upon meaning and concepts, cannot be obtained without

awareness of shared objects and of oneself and others participating in linguistic convention. So long as consciousness involves truth claims, self-consciousness must be discursive, enjoying propositional knowledge that cannot be had apart from knowing objects and other interlocutors. At one blow, solipsism and skepticism of other minds are precluded.

This view generally embraces epistemological foundationalism by treating the linguistic conditions of meaning not just as enabling all claims, but as juridically deciding their truth. Since these linguistic conditions comprise contingent interwoven conventions of speech, making them epistemological foundations renders all standards of justification just as corrigible and contingent as these practices. The pragmatic holism that results thereby undercuts itself by rescinding any abiding authority from its own account of language formation and of the forms of consciousness. By treating linguistic conditions of meaning as conditions of truth, these thinkers fall into the same dilemma awaiting any attempt to seek transcendental conditions for knowledge. It makes no difference whether the transcendental conditions be construed psychologically, as “presuppositionless” forms of conscious intentionality, or intersubjectively, as forms of linguistic practice or cultural interaction. However the transcendental conditions are characterized, the dilemma is the same: by privileging *anything* as a foundation juridically determining knowledge, one must claim direct knowledge of that privileged foundation. Yet the turn to investigate any transcendental foundation as determinative of objects of knowledge follows from recognition of the dogmatism of any direct appeal to the given. Accordingly, the transcendental investigation of knowing falls prey to its own critique of dogmatism, for its own foundational epistemology makes knowledge claims about the conditions of knowing before its investigation has established any authority for cognition. It is simple to forego such dogmatic seeking to “know before knowing,” without abandoning the intersubjective constitution of meaning. One just need refrain from considering the linguistic conditions of meaning to be juridical conditions of truth. This allows massive uncertainty about what terms mean to be impossible without making impossible massive ignorance of true meanings, such as during all those centuries before humanity became enlightened by Davidson. The fixing of meaning may depend upon “triangulation,” but this determination of meaning applies equally to all thoughts, be they true or false. For just this reason, the conditions of language must leave undetermined the validity of the claims they indifferently make possible. In other words, language, like consciousness and every other enabling condition of thinking, must leave thought free to investigate the truth without foundations.

Solipsism and skepticism of other minds are still refuted when one pares away the bogus epistemological foundationalism from the linkage of self-consciousness, consciousness of objects, and consciousness of others. One still cannot be *certain* of oneself without being *certain* of objects and of other selves,

even if knowledge is not thereby guaranteed. Consciousness of objects in space and of one's own body will necessarily accompany self-consciousness. Although consciousness of spatial objectivity and of one's own body may not require linguistic intelligence, individuals can hardly engage in linguistic interaction without such awareness and the respective embodiments of which it is conscious. To do so, potential interlocutors must have an animal reality enabling them to express themselves in a recognizable way to one another, in conjunction with commonly perceiving other tangible objects about which they might communicate and think.

Satisfying these requirements does not mandate that individuals are only self-conscious while aware of and/or communicating with other interlocutors. Individuals can find themselves completely isolated temporarily or for good, yet retain their *discursive* self-consciousness so long as they had earlier participated in the interactions enabling them to learn language and the practice of thinking.

Whether this prior participation applies to self-consciousness per se depends, however, upon whether self-consciousness must be accompanied by linguistic intelligence. Obviously, when they do go hand in hand, prior interaction will be a prerequisite. Self-consciousness, however, can hardly be wedded to linguistic intelligence, given what must occur for language to be originally created or for an individual to first learn a language already spoken within a linguistic community. In both cases, individuals could have no consciousness of self, of objects, or of other minds before they wielded language if self-consciousness cannot be had without linguistic intelligence.

If discourse were intrinsic to self-consciousness, then any triangulation by which meaning might be fixed and language acquired would have to generate at once awareness of objects, self, and others. For if self-consciousness were necessarily discursive, individuals could have no awareness of themselves in distinction from other objects and other selves *before* becoming linguistically competent. Prelinguistic individuals could not then recognize any of their own common responses to any commonly observed objects and thereby acquire language, concepts, and knowledge. Without already possessing a prelinguistic, preconceptual, nondiscursive consciousness of objects, self, and others, participants in originating language or in learning an existing one would be unable to distinguish their responses from one another or from objects that they observe in common.

For this reason, self-consciousness not only need not be, but cannot intrinsically be discursive, nor necessarily involve discursive knowledge. Mind may come to supplement its self-consciousness with thought and language thanks to the additional psychological development of intelligence. Yet, in order for this possibility ever to be realized, self-consciousness must be able to distinguish subject and object and have consciousness as its object without thinking concepts, making judgments, or concluding inferences.

Nondiscursive consciousness and self-consciousness deprive neither spatial things, including the body and other selves, nor mental processes of conceptual determination. Whether or not consciousness theorizes, nature, human physiology, and psychological activity can hardly escape pervasion by conceptualizable relations between individuals and their particularities, involving such different types of universals as abstract qualities, class memberships, genus and species, and normative, “concrete” universals rendering them “good,” “true,” or “beautiful.” What is conceptually determinate in objectivity has an independence unperturbed by mind’s failure to apprehend it by perceiving and understanding without theorizing. Conceptualization does involve linguistic intelligence and theorizing therefore rests upon the intersubjective practice engendering language and enabling thought. By contrast, the nondiscursive self-consciousness required for the formation of linguistic intelligence can and must be certain of itself in distinction from other objects and other selves without thinking or saying anything.

Conceiving how this can be is the central challenge confronting the theory of self-consciousness, a challenge whose solution will secure the extension of self-conscious awareness beyond the confines of discursive rationality.

9.4 Desire as the Minimal Form of Self-Consciousness

Hegel has provided the key elements of the solution in his celebrated analysis of desire and recognitive self-consciousness. This analysis is foreshadowed in chapter 4 of his *Phenomenology of Spirit*’s immanent critique of the foundational standpoint of consciousness,²² but systematically outlined in his *Philosophy of Subjective Spirit*. The former account has provided fodder for the most wide-ranging extrapolations from Marx²³ through Kojève to all the minions who attended Kojève’s famous Paris lectures on Hegel’s *Phenomenology of Spirit*.²⁴ What these theoretical adventures have largely ignored is the significance of Hegel’s placement of his systematic analysis within an account of consciousness that precedes that of intelligence. Insofar as Hegel locates language and thought within intelligence, his prior account of desire and recognitive self-consciousness is systematically prelinguistic and preconceptual. This is precisely what makes his investigation so important for understanding how self-consciousness can be without thought and language, as well as how discursive rationality can itself arise.

The key move that opens the door to a prediscursive self-consciousness is Hegel’s insight that desire comprises the minimal form of self-consciousness,

involving, to begin with, neither thought, language, nor intersubjectivity.²⁵ This insight is far from self-evident, especially when desire is not carefully discriminated from every urge and emotion.

Desire might seem basic to the sentient irritability of animal life, whose metabolism, unlike that of plants, requires making an effort to obtain means of satisfaction perceived at a distance. The urge to do so is endemic to animal organisms and such urges are at hand already with the mental activity of the psyche, which feels its own urges, without yet distinguishing itself from objects indicated by its mental contents.

Unlike feeling in general, however, desire is intentional because in desiring, the subject of desire relates to the object desired. Desire therefore involves consciousness of its object. This consciousness of the object of desire minimally incorporates not just sensation, providing certainty of an undiscriminated manifold, but perception of things with properties and understanding of dynamic relations of force. Perception's discrimination among manifold sensations is required in order for desire to have a determinate thing as its object, whereas understanding of force is necessary in order for desire to have any practical fulfillment, which requires contending with the resistance of things to the force wielded by the desiring body.

Desire, however, is not just sensation, perception, or understanding, involving merely a cognitive awareness of objects. If desire just consisted of sensing a sensible manifold, perceiving things and their properties, and understanding the dynamic relations of things, it would not have any practical connection to its objects, nor involve self-consciousness. Self-consciousness would be lacking insofar as such awareness of objective phenomena would not be an object of its own consciousness, whether or not what is sensed, perceived, and understood includes consciousness's own body. Even in perceiving one's own body engaged in observing one's world, one does not perceive one's perceiving consciousness, any more than in perceiving others one perceives their respective awareness.²⁶ One may relate to one's mental contents to be aware of objects, including oneself or another, but one does not thereby relate to one's own consciousness of them.

The decisive point that desire brings to the fore is that self-consciousness does not revolve around what type of object cognitive awareness addresses, but rather depends upon something transcending cognitive relations entirely.

Hegel himself confuses matters by suggesting that self-consciousness becomes kindled when consciousness observes laws of nature on the one hand and living organisms on the other. In the addition to paragraph 422 of the *Philosophy of Mind*, he maintains that observing law in nature confronts consciousness with the same inner unity of distinct determinations characterizing its own ego in uniting all its mental contents.²⁷ Although Hegel qualifies the implied self-consciousness as something only *implicit*,²⁸ consciousness hardly becomes an

object to itself by observing lawful interactions of appearances. Law may unite differentiated contents similarly to the ego, but law does not oppose these determinations in the manner in which consciousness disengages itself from its mental content while relating to it as something objective. Lacking this fundamental activity of the opposition of consciousness, law cannot comprise consciousness of an object, any more than consciousness of law can comprise consciousness of consciousness.

Consciousness of life is similarly unable to confront mind with consciousness itself as an object. Hegel may be correct in claiming that consciousness faces something subjective when observing the self-sustaining process of a living organism.²⁹ Yet even if the self-ordering of life is akin to the self of consciousness, the consciousness *of* life is still distinct from the life it observes. Consequently, consciousness does not become objective to itself simply in having life for an object.³⁰

Desire, however, surmounts these limitations, if only fleetingly, by introducing a noncognitive dimension depending upon the animal embodiment of consciousness. In desiring something, consciousness not only perceives an object as external to itself, but regards it as a means of satisfaction, whose fulfillment of desire remains deferred until the urge of desire has kept this alive as a goal long enough for action to be taken to satisfy desire.³¹ The object of desire thereby counts as something whose independence from the subject of desire is to be annulled by the subject by somehow removing the object's externality and assimilating it. This projected nullification by assimilation is not just a theoretical imagining or an expectation of some future fulfillment. Desire instead comprises an impulse to achieve gratification, removing the indifferent givenness of the object of desire by having the conscious subject somehow take hold of it.

However this occurs, the satisfaction of desire takes some objectively perceivable form exhibiting for consciousness a subjectification of the object of desire, which consciousness initially demarcated from itself as something external. Only insofar as this subjectification is manifest to consciousness can it consist in a gratifying experience. Nonetheless, this gratification comprises something merely negative, a consumption of the object of desire, canceling in some respect its external independence and absorbing it into the subject.

Insofar as this nullification requires neither conceiving nor saying anything, desire does not involve discursive rationality and can be had by dumb animals and prelinguistic children. Willing, by contrast, does involve thought and language when volition pursues ends that can only be conceived, acting not just on purpose but with a motive that concerns the universal implications of the deed.³² Desire, by contrast, seeks no positive fulfillment of any end or principle, but merely appetitive satisfaction, overcoming its object's independence. By so consuming the objectivity of what it desires, consciousness relates not to any

objectification of subjective aims, but solely to its own assimilation of the object. To achieve this gratification, eliminating and absorbing the independent objectivity of the thing desired, consciousness must be embodied and able to exercise the basic sentient irritability of animal metabolism. Only then can consciousness actually undercut its desired object's independence and assimilate it to its own living subjectivity. This requirement holds whether gratification consists in complete material consumption of the object or some more formal alteration that, for example, puts the object before consciousness's most theoretical senses, sight and hearing, while leaving it otherwise undisturbed.

Of course, mere animal embodiment is not enough for consciousness to take satisfaction and comprehend any such material or formal assimilation as its subjectivization of the object of desire. Consciousness must further experience the consuming body as its own, instead of observing the satisfaction of desire as an event transpiring between two alien things.

Self-consciousness might seem already presupposed in consciousness's recognition of its own body. If so, desire would forfeit any role in the constitution of consciousness of self. This would require, however, that consciousness can be aware of its body as its own entirely apart from desire satisfaction and that mind is self-conscious simply in being conscious of its embodiment. Yet can consciousness be certain of its own body just through perception, proprioception, or the body-relative positionality of perception? And even if it can, does this body recognition comprise having consciousness as an object? So long as these questions need not have a positive answer, desire cannot be preempted from playing an essential role in constituting self-consciousness.

Still, imputing self-awareness to desire might appear precluded by how consciousness's unique embodiment is necessary for the unity of consciousness. This could suggest that consciousness must always be aware of itself as embodied in the world. The unity of consciousness, however, may depend upon mind's unique embodiment without consciousness having continually to be conscious of that embodiment. Consciousness can thus still be beset by the doubts plaguing Descartes when he perceives his own body, yet wonders if he is only dreaming, or when he observes figures crossing a square and questions whether they are just automatons.³³ Even though consciousness cannot doubt without having a unique embodiment, particular representations can still be suspect, including the most familiar observations of one's body, contra G. E. Moore's professed inability to doubt his perception of his own hands.³⁴ This holds even when consciousness doubts theoretically, employing concepts and language whose acquisition in prior linguistic interaction renders some past existence of others and of one's embodied self beyond question. Accordingly, a role for desire in self-consciousness is not rendered redundant by the necessary embodiment of consciousness. Desire's subjectivization of its object enables consciousness to

confront itself in an objective process, which it does not experience simply by inhabiting a body through which its mental content is united and individuated.

The specific experience of desire involves consciousness of objects in space and of the desiring mind's own body, for the consumption of the object of desire brings both into play for consciousness itself. None of this requires thinking concepts or employing language, since perception and understanding already provide the needed apprehensions without involving discursive rationality. There is thus no need to deny that preverbal children and dumb animals can desire and achieve gratification, attaining whatever minimal self-consciousness this provides.

The self-consciousness desire comprises is, however, merely negative in nature. By canceling the externality of the object and absorbing it into the subject, desire satisfaction enables consciousness to experience the reduction of the object to itself. This renders consciousness of the object identical to consciousness of self, at least to the extent that the negating of the object is equivalent to its subjectivization.³⁵ Yet because this identity resides in the consumption of the object of desire, it retains no abiding existence. The awareness of self that consciousness obtains through desire has no positive filling. It is instead wholly abstract and empty,³⁶ insofar as the worldly manifestation of the self consists in removing rather than engendering any persisting reality. The only objective manifestation of self that desire affords consciousness is its body's negating of the independent being of the object of appetite. This negation is no sooner achieved than it eliminates itself, confronting consciousness with the same predicament from which desire satisfaction began. The consummation of desire satisfaction extinguishes the nullification process of some external dimension of the object of desire, terminating the self's manifestation to itself and leaving consciousness confronting an alien objectivity all over again. Self-consciousness can take no more ephemeral and empty form than this. Desire may kindle self-consciousness, but it provides a fleeting form ever burdened by consciousness of a recurring, independent, self-less object.³⁷ Because desire satisfaction takes place through a transient consumption of an external thing by one subject, the subjectivization of the object of desire terminates itself and the objectification of the self thereby relapses into subjectivity. Gratification thus leaves consciousness back in the same opposition to independent objectivity from which appetite arises.³⁸

9.5 Desire for Another Subject of Desire

The ephemeral, abstract self-certainty of desire represents the nearest consciousness can get to self-awareness so long as mind relates just to things rather than other conscious subjects. The situation becomes very different when conscious-

ness directs its desire not at mere objects of desire, but at other subjects of desire. This move opens a new field for self-consciousness in which a more abiding self-manifestation can be obtained, still without having to invoke thought or speech.

Awareness of one self by another provides a breakthrough in the development of self-consciousness because it makes possible two features necessary for any positive consciousness of consciousness: that mind be aware of an object from which it is disengaged and that that object be consciousness.³⁹ So long as mind relates only to itself or to objects that are not subjects, these dual conditions of self-consciousness cannot be met. No atomistic self-relation of a single mind can provide the disengagement allowing consciousness to be an object to mind. This applies as much to the reflexivity of “pure” introspection as to the concrete awareness of one’s own body. Whereas introspection remains confined within the subject, lacking the required disengagement, consciousness of one’s body does not present mind with *consciousness* as an object opposed to itself. Significantly, one can thus be conscious of one’s own body, distinguish it from other objects, and be aware that it and other organisms are alive *before* becoming self-conscious.⁴⁰ This is because whether mind confronts its own body, some other thing in space, or, more particularly, another living organism, there is no abiding objectification of awareness unless mind’s object can be apprehended *as* a conscious self. Consequently, consciousness of consciousness cannot occur unless consciousness confronts *another* consciousness as its object.

In order for one consciousness to be conscious of another, both must be embodied. On the one hand, the other consciousness can be confronted only if it has a manifest, perceivable embodiment of its own, making possible its own enduring unity and individuation. On the other hand, consciousness can be aware of another consciousness only if it itself is embodied, allowing it to sense, perceive, and understand as an enduring unified and individuated awareness of its own. Only then can either party distinguish its opposing subject from itself.

Animal behavior is replete with cases where animals act in function of at least implicit recognition of the sentience and desires of another predator or prey. For example, low-nesting birds will engage in “distraction display,” feigning injury so as to draw a predator away from their nest, just as stalking animals will conceal themselves from their prey, so as to hunt successfully. As Dennett observes, this could involve an “unreflective adroitness,” where animals do not explicitly represent the consciousness to which their behavior is oriented.⁴¹ Yet, at the very least, such behavior indicates an awareness of objects as sentient and irritable, capable of perceiving and moving themselves on the basis of their own urges. In this respect, we here have a “second-order” intentionality, not merely perceiving and desiring objects, but perceiving and desiring certain perceptions and desires of others confronting it.⁴²

Nonetheless, however mind may be conscious of *another* consciousness, this does not make mind *self*-conscious unless confronting the other consciousness somehow reflects back to mind its *own* awareness.⁴³ Yet if that self-reflection arises through mind's consciousness of the other awareness, then the resulting self-consciousness is more than consciousness of consciousness.

In that case, self-consciousness can no longer just be conscious of consciousness. Consciousness is awareness *of an object* from which mind differentiates itself. For this reason, when mind is conscious *of consciousness*, mind is not aware of the same object of which its object, consciousness, is aware. Whereas consciousness of consciousness has a subject as its object, that subject is not conscious of consciousness but only conscious of an object which is not a subject. Consequently, consciousness is not reflexively aware of itself when it is conscious of consciousness.⁴⁴ To be reflexively conscious of itself, mind must be aware not just of consciousness, which is just conscious of an object. Mind must instead have as its object consciousness *of consciousness*. Only then can mind be conscious of a consciousness that shares its structure by equally being an awareness of consciousness.

Mind, however, cannot reflexively have consciousness of consciousness as its object by relating to its own mental content. Introspection always confronts something different from its own reflection, for what it relates to is not its own self-relation, but its reflection's awareness of what it reflects upon. Even if reflection reflects again on its awareness of its consciousness of something else, the new reflection once more confronts not itself, but what it subjects to its gaze.⁴⁵

This discrepancy only gets surmounted when mind confronts as its object *another* consciousness of consciousness. Then what consciousness is aware of *is* a consciousness of conscious awareness. Although this involves consciousness of *another* mind, it provides *self*-consciousness if this other mind's awareness reflects mind's awareness of it and not merely a consciousness like mind's own. Under this condition of a reciprocating consciousness of consciousness, the first consciousness confronts its own consciousness of consciousness in being conscious of its counterpart's consciousness of consciousness. Moreover, since this other party is also conscious of another mind that has the former's awareness of it as its object, the second participant equally encounters its own consciousness of consciousness reflected back to it. Both participants are thereby self-consciousness in being conscious of one another.

Each participant in this mutual consciousness of consciousness shares the same structure of consciousness and is conscious of this convergence. Both are aware of being the object of one another's consciousness while being aware of their counterpart's awareness. Both are thereby equally self-conscious by being conscious of the opposing self-consciousness who is similarly self-aware through awareness of its partner. Consciousness thus becomes self-conscious through a

reciprocal recognition process whose participants are self-aware by being conscious of the other participating self-consciousness who is self-conscious in the same way.

Such reciprocal recognition may be formally conceivable, but it is far from self-evident how it can be realized. The daunting problem is that no merely cognitive perception and understanding can encounter a recognizably objective appearance of consciousness. The self-reflective activity of consciousness cannot be objective in any mere thing with properties nor in the expression of force and the lawful connections of dynamic relations, nor even in the self-ordering unity of living things, including one's own body. Consequently, consciousness cannot objectively confront its own awareness by merely perceiving and comprehending another embodied subject.

Desire has proven to exhibit the self to consciousness at least negatively in nullifying the independent existence of the desired object. Can a more positive enduring outcome proceed from a noncognitive recognition process where consciousness directs its desire at the desire of another?

If consciousness desires another subject, rather than the *desire* of that subject, that desired subject figures as just another object of satisfaction, whose consumption provides fleeting gratification. In this unreciprocated desire relationship, consciousness obtains no more than the same empty and transient self-consciousness that momentarily results from any appetitive desire. By subordinating another self to one's desire satisfaction, one may perceive how one's own self succeeds in nullifying the independence of another. Yet achieving satisfaction in this unilateral way provides only a negation of the other, rather than any positive outcome reflecting to consciousness the objectivity of its own self.

Consciousness's attempt to subordinate another self to its desire may meet such resistance as to require consciousness to risk its own life in the process. In so doing, consciousness may subordinate its own living embodiment to its pursuit of gratification. Yet putting its own life in jeopardy hardly provides any independent lasting objectification of the self's centrality. By threatening to obliterate consciousness's own reality in the world, as well as the independence of its object of desire, the risking of life only highlights the inability of unilateral desire to give consciousness any abiding objectification.⁴⁶

In his celebrated "Master-Slave" analysis, Hegel presents another possibility where consciousness succeeds in subordinating another consciousness to its desire in an ongoing relationship.⁴⁷ Instead of risking its life or obliterating that of its counterpart, the domineering consciousness manages to have the other serve its desires in an enduring arrangement, where the subservient individual engages in activity providing continual satisfactions for its master. Unlike the momentary consummation of appetite, this persisting subordination provides the domineering consciousness with an enduring positive objectivity of its desire satisfaction,

residing in the ongoing observable toil of the subservient individual and the perceivable lasting gratification it supplies to its master. The means of satisfaction that get provided do forfeit their independent externality by becoming consumed. Yet, the subservient individual retains a persisting external objectivity for the consciousness it serves. Instead of effecting a single gratification that passes away the moment it occurs, the serving activity achieves a lasting fulfillment of recurring desires. This provides an objective reflection of the consciousness of the domineering individual to the extent that the desires being satisfied are those of the latter. Consequently, in observing its subordinate satisfy its master's desires through ongoing provision of means of gratification, the domineering individual confronts its own desires in their fulfillment through its subordinate's continuing performance.

Yet the achievement of self-consciousness is impeded by the absence of reciprocity in the satisfaction of desire. The master's desire to subordinate its other does not correspond to the subordinate's desire, which serves the former rather than desiring its own subordination of the master. This discrepancy prevents consciousness from becoming self-aware in the awareness of its subservient partner. Precisely because the subservient consciousness submits to its master's desire, the domineering individual cannot share its subordinate's desire. In confronting the subordination of its counterpart, the master may apprehend a reflection of its own desire, but it is not therein conscious of its own awareness. Its consciousness remains distinct from self-consciousness because the consciousness opposing the master is irreducibly different in kind from its own.

Owing to this discrepancy, self-consciousness is not and does not experience itself as a universal self-consciousness, conscious of sharing its form of self-awareness with others. This situation, where mind is self-aware without attaining universal self-consciousness, is, as Errol Harris observes,⁴⁸ the situation that Heidegger generalizes as the irrevocable fate of the individual in face of *das Andere*, the other immediately confronting the individual as a stranger with whom nothing is inherently shared. Because consciousness here opposes another mind fundamentally alien to itself, it experiences *Geworfenheit*, the feeling of alienation in respect to another in whom it cannot recognize itself.⁴⁹ Because mind desires the other in such a way as to preclude experiencing the other as having the same awareness as itself, self-consciousness cannot be "at home with itself in its other."⁵⁰

9.6 Recognitive Self-Consciousness

The discrepancy in unreciprocated desire, however, need not remain final. To overcome the divide, each party must desire in respect to the other what its

counterpart desires in respect to it. Then, the object of desire is an independent other, yet no less identical to the consciousness desiring it. This reciprocated desiring occurs when, as Sartre formulates it, two individuals engage in a relationship in which each desires the desire of the other for it.⁵¹ Within this interaction of two living, desiring embodied selves, one is conscious of another individual who exhibits its awareness of one's own consciousness by perceivably desiring to fulfill one's own expressed desire while one does the same in turn. Both desire the reciprocation of their desire for the other, thereby conforming to one another's desire. With this mutual coordination, the desire of each is equivalent to the desire of the other. Overcoming the discrepancy between master and slave, this mutual recognition of desire brings each party to be aware of another consciousness whose awareness not only reflects the former's own desiring consciousness, but exhibits a desiring consciousness identical in kind. Although each participant recognizes its awareness to be of the same type as that of the other, they remain aware of one another's distinct being in the world. Consequently they retain their individuality and their relationship does not collapse into an undifferentiated unity. Rather, they each are conscious of themselves in their consciousness of one another, knowing that they share in this dual awareness. Consciousness and self-consciousness are united insofar as the object of which each party is conscious is the same self-consciousness it therein knows itself to have. Hence, each participant is not just self-conscious, but conscious of being a *universal* self-consciousness, self-aware just as its counterpart is self-aware.⁵²

The emergence of universal self-consciousness in the reciprocal recognition of desiring subjects becomes misunderstood if its constitutive elements get obscured by the addition of extraneous relations. This applies as well to the unreciprocated "master-slave" subordination of one consciousness to the desire of another, which has commonly been identified with historical institutions from slavery to feudal bondage. Such interpretations tend to ignore that these forms of consciousness involve relations of desire that involve neither institutional forms of community, nor thought and language.

The misnamed "master-slave" relation merely comprises the enduring subordination of one conscious individual to the desire of another, with no necessary institutional ramifications, such as legal status or membership in some further community. Similarly, the relation of reciprocated desire simply involves two individuals attaining self-consciousness by desiring to satisfy one another's desire. This relationship has been associated by Sartre, for example, with love and by Kojève and many others with different institutions running the full gamut of property, moral, family, social, and political relations. Strictly speaking, however, the relationship of cognitive desire only relates its participants as subjects of mutual desire, who thereby are conscious of their own desiring awareness in being conscious of the desire of their counterpart. Love and rights do involve types of

reciprocal recognition, but more than desire and gratification must be in play for individuals to relate to themselves as subjects of love or bearers of rights.

Systematically, the three shapes of desire comprise forms of consciousness through which self-consciousness obtains its minimal formation. Desiring some nonself, desiring the subordination of another self, and mutually desiring the desire of another all presuppose sensuous consciousness, perception, and understanding, and cannot proceed without their engagements or the embodied psyche on which these rest. Without these three forms of consciousness the object of desire could not be sensed, perceived, or understood by the desiring subject, nor could the dynamic relations be comprehended on which the practical satisfaction of desire depends.

Consequently, it would be ludicrous to treat any of the forms of desire as prerequisite for mind to be aware of its own mental contents. That awareness of mind's own determinations is not equivalent to self-consciousness, but merely comprises the "prereflective" self-relation enabling mind to have mental content of any sort. If that self-relation were the product of desire, desire would constitute rather than presuppose consciousness. Then, no object could be perceived without having been desired before, as if desire could already have an object neither sensed, perceived, or understood. Furthermore, desire could never be suspended without eliminating consciousness. And most incoherently of all, desire could not be *conscious* of any object of desire in the first place since consciousness could only issue from desire.

To the degree that self-consciousness, as well as consciousness are preconditions for linguistic intelligence, and that recognitive desire is constitutive of any abiding self-consciousness, the mutual desire for the desire of another must be able to operate without thought and language. Otherwise, the origination and acquisition of language could never be explained, since before becoming discursively rational, individuals would lack self-consciousness. This would leave them unable to differentiate themselves from other conscious selves or other mindless things.⁵³ Accordingly, there could be no "triangulation" to fix meanings through individuals recognizing their shared responses to objects they observe in common.

This difficulty could appear ineluctable if individuals cannot recognize themselves to be self-conscious without *thinking* how each is a particular individual instantiating the universal nature of self-consciousness. How else, after all, could individuals know themselves to be self-conscious, as well as conscious of other self-conscious individuals, without conceiving the concept of self-consciousness and recognizing one another to embody individually that common universality? Individuals would simply be unable to be self-conscious without engaging in thought if recognitive self-consciousness involves understanding self-consciousness in general. Moreover, if language cannot be private and conceptualization

cannot occur without employing language, self-consciousness then would necessarily involve linguistic interaction. Whether desiring the desire of another, individuals could only be self-conscious by being conscious of themselves and others as discursively rational. If this were true, neither dumb animals nor prelinguistic children could be accorded self-consciousness. And if consciousness depends upon self-consciousness, as Sartre argues,⁵⁴ then no animal or child lacking discursive rationality could even be conscious.

The singular nature of desire, however, enables recognitive desire to operate without thought or talk of the concept of self-consciousness. Whether an appetite for some thing, a desire for subordinating another self to one's own gratification, or a mutual desire for the desire of another, desire has an individual character as much as does its object. Consequently, both desire and the object of desire can appear and be apprehended by consciousness without conceptualizing or giving linguistic expression to anything universal. Feelings of desire can be made perceptibly manifest to others thanks to the expressive capabilities of the embodied psyche. On the other hand, the sensuous apprehension, perception, and understanding of consciousness suffice for mind to be aware of these expressions of desire and any behavior that accompanies them. Conscious individuals thereby have all they need to engage in preverbal communication and interact in recognition of their desires.⁵⁵ Speaking or theorizing is not required and for this reason all three forms of desire can be experienced by animals and children lacking linguistic intelligence.

Recognitive desire thus provides self-consciousness with a prelinguistic, preconceptual constitution, on the basis of which the acquisition of thought and language becomes possible.⁵⁶ The living mind, encompassing psyche and consciousness, gains awareness of its own desiring consciousness in confronting the desiring consciousness of another. Each in turn experiences its own desire satisfaction to be desired by the other, whose own gratification is just as much desired by the first. On both sides, what participants experience is the correspondence of desires and of the objects in which satisfaction resides, rather than the correspondence of concepts and of the objects in which theoretical truth consists. Unlike appetitive desire pure and simple, recognitive desire has the distinction of matching desire with an object that is a subject of desire. Moreover, because the desired subject of desire is not consumed but maintained in a mutual ongoing relationship, self-consciousness achieves a persisting reality. Consequently, as Popper suggests, to be self-conscious selves, individuals must experience one another's existence extending into past and future, in expectation of continuing recognition.⁵⁷

The resulting self-consciousness no more involves thinking any concept of mind's own self than its accompanying consciousness of another self involves theorizing about it. In both cases the apprehension of self, be it one's own or

another, relies merely on prelinguistic preconceptual perceptions and feelings of urge and satisfaction. Linguistic intelligence must be had, of course, to theorize about oneself or others. Yet *before* language can be enacted or acquired, individuals must distinguish themselves from other things and one another. These conscious differentiations occur in recognitive desire.

Nonetheless, the self-consciousness arising in recognitive desire comprises an essential precondition for the intersubjective process engendering language and thought. Unless individuals discriminate self, things, and others through desire, they are in no position to comprehend how they respond to one another in reference to things and selves they observe in common.

Consequently, Cartesian doubt is powerless against certainty of not just oneself, spatial things, and other interlocutors. Interlocutors also cannot doubt that they and others are subjects of desire. Self-awareness and awareness of others must include apprehension of this common identity, without which one cannot become objective to oneself or an other.

Accordingly, the certainty of oneself as a subject of desire recognizing other subjects of desire underlies any certainty individuals can have of their own common rationality. Because recognitive desire makes it possible for individuals to observe one another expressing a converging consciousness of the world they share, it equally enables them to be certain of possessing an objective and universal awareness. On this basis, they can know themselves and others to be rational selves, partaking of a consciousness that is universal in character. Once individuals develop linguistic intelligence, they can conceptualize this universal nature of their self-consciousness and become theoretically self-knowing.

9.7 The Genetic and/or Constitutive Role of Recognitive Desire in Self-Consciousness

Recognitive desire may engender self-consciousness, but does it do so only genetically or also constitutively? Is recognitive desire just a necessary stage in the early preverbal development of the conscious individual, enabling that individual to remain self-conscious without further engaging in recognitive desire? Can individuals retain their self-consciousness, as well as their awareness of the commonality of their self-consciousness, only so long as they remember their recognitive experience, while not currently interacting with another conscious individual? Or is recognitive desire a constitutive element in self-consciousness that must always be operative for mind to be conscious of itself? Alternately, does self-consciousness merely require that recognitive desire *be able to* accompany it, as either a remembered or actual experience, analogously to how the representa-

tion "I think," according to Kant, must be able to accompany our consciousness, even if not always actually thought?

These questions pertain generally to mind, no matter what its species being. Yet they have special application to humanity given the extended dependency with which *homo sapiens* begin their lives. From birth, humans rely to an almost unparalleled degree and for a largely unparalleled duration upon the care of others for survival. Whereas most other animals can fend for themselves soon after they are born, relying upon instinct supplemented by their own trial and error, human infants exhibit such complete helplessness that they cannot even respond to stimuli to satisfy their most basic survival needs, let alone fend off any danger. For many months, the human child is unable to control its movements sufficiently to approach sources of nutrition and even ingest the nourishment it needs. Whatever random motions the infant body makes hardly suggest any purposiveness, conscious or unconscious.⁵⁸ It is as if the infant has no instincts, no unlearned adaptations to its environment, no power of behavior besides the most limited array of automatic reflexes and body rhythms.⁵⁹ Instead of feeding, clothing, or otherwise sheltering itself, the infant must be fed, clothed, and sheltered by another agent sufficiently mature and committed to carry out these tasks.⁶⁰

The infant, however, does show adaptation to its utter dependency upon the care of others in responding to its own feelings of discomfort and hunger by signaling its need for care.⁶¹ The infant may not be able to feed, clothe, shelter, or otherwise protect itself, but ordinarily it can cry, and the infant's immediate needs will be met provided its cries are heard and interpreted by a responsive caregiver, rather than by an alerted predator. All this can occur, of course, without the infant being conscious of any objects, including potential caregivers, or having any intention to signal its wants to anyone. Nor need the infant even be able to discriminate its wants.⁶² The infant need only feel its own discomfort and express this feeling in wailing or some other attention-gaining behavior, something involving no more than the psyche with its animal sentience and irritability. Although the individual psyche is sufficient to feel comfort and discomfort, in the human infant, both feelings bear an implicit relation to the care of another person. The feeling of discomfort is accompanied by the urge to communicate that feeling to someone who can satisfy the wants it expresses, whereas the feeling of comfort results from the caring response of another.⁶³

This predicament entails that once the infant's psyche has given rise to consciousness, the infant's primary object will be the parent or guardian who cares for it.⁶⁴ Insofar as the infant's very survival depends upon an ongoing relation to at least one such responsible caregiver, this interaction appears unavoidably to determine the initial psychological development of every human individual. Admittedly, the caregiver always operates as an individual in a world of other things, both animate and inanimate, that fall within the horizon of the infant's

awareness. Moreover, the consciousness of the infant cannot be regarded as a product of “mirroring,” where the infant emerges as an aware self only in the reflection of its caretaker’s consciousness, as expressed in their affective interaction. Unless the infant can already perceive the mirroring gaze of the other as a reflection of the infant’s own desiring self, the infant can hardly come away from the experience with any mirrored consciousness.⁶⁵ For this to occur, conscious sensation, perception, and understanding must in some respects already be at hand.

Even so, the dependence of the infant upon some parent or other caregiver does put an interpersonal practical relation at center stage. That relation revolves around the satisfaction of infant need and desire and the correlative expressions of want and gratification. Although the infant may not, at the outset, have any consciousness of the things it needs and the person providing them, once psychological development enables the infant to distinguish them from its own awareness, infant consciousness finds its helplessness placing itself in relation to another consciousness upon whom it is dependent for its satisfaction. Moreover, this relation is not just a single event, but a recurring interaction, fostering habituated feeling and behavior. Furthermore, whenever the infant enters into relation with others in addition to its first and/or primary caretaker, the infant’s relation to other develops into a discriminated relation to a plurality of different individuals, comprising a community in which the life of the child is embedded.⁶⁶

Whether or not the infant cries with the intention of gaining the attention of its caregiver and soliciting the satisfaction of its need, the infant does communicate its discomfort and can perceive how this communication is or is not followed by a caring performance on the part of its custodian. With the experience of repeated caregiving following intervals of recurring discomfort, the infant can acquire the habit of waiting for the return of care, as well as come to recognize the identity of its abiding caregiver.⁶⁷ The ensuing relationship has the nonreciprocal character of the “master-slave” relation, where one individual subordinates its activity to satisfy the desire of another. What is specific to the infant–caregiver relation, however, is that the infant is completely dependent upon others and cannot reciprocate the care it receives. Initially, the infant can at most express its satisfaction of desire through some signs of pleasure. Once the infant recognizes the caregiver as a recurring provider of comfort, the infant can feel and express comfort at the appearance of the caregiver and discomfort at the caregiver’s absence. *If* the caregiver takes satisfaction in the infant’s feelings of comfort at the mere appearance of the caregiver, the relationship then begins to overcome a one-sided desire satisfaction. A reciprocal relation starts to emerge, where, on the one hand, the infant takes satisfaction in the caregiver’s expressed desire to satisfy its needs and the caregiver takes satisfaction in the infant’s comfort in the caring it provides. The communication remains nonverbal, but a rudimentary mutual

understanding emerges, registered in the feelings and expressions of both infant and caregiver.⁶⁸ This introduces an interpersonal relationship transcending biological nurturing requirements. On the one hand, the infant now feels and expresses discomfort, not because of physiological want, but due to distress at the perceived absence of the caregiver and the suspension of their interaction.⁶⁹ On the other hand, this expression of a fear of abandonment has its converse in expressions of comfort in being cared for, foreshadowing feelings of love.⁷⁰

Implicit in this relationship is that the infant's survival is dependent upon the deliberate foresight of another to whom the infant has an innate urge to communicate.⁷¹ This situation continues through human upbringing to the extent that a child does not learn independently, like most dumb animals, by following instinct supplemented through trial and error. Instead, children are instructed, submitting to the rational tutelage of individuals who have already undergone the same sort of assisted cultivation.⁷² This inculcates more than particular habits and skills. It also imparts a general habituation to submitting one's desires and impulses to patterns of behavior desired and imposed by another agency.⁷³ This comprises a certain reversal of the nonreciprocated caring that the child initially undergoes, for now it is the child who attends to the ends of others. Yet, it equally reflects and contends with the emergence of a conflict of wills between caregiver and child that must be reconciled. In order for such reconciliation to result in the successful termination of upbringing, it ultimately requires mutual acknowledgment of the independent individuality of both parties. That cannot be actually achieved until the child learns to care for him- or herself, something engendered when caregivers and teachers deliberately refuse to provide all the assistance that earlier had been expected.⁷⁴ This coming to independence, however, is not compatible with the independence of others, unless it involves giving them respect. Insofar as the instructors cultivating the child have rational intelligence, enabling them to recognize and communicate universal norms of conduct, the cultivation they impart can equally be an ethical formation, enabling the ripening youth to embrace a conception of right that is no longer an external imposition, but a personal responsibility to give others their due.

Throughout all these interactions, the maturing individual is made conscious of becoming a self inherently connected to other self-conscious individuals, who share in the cultivations that are communicated.⁷⁵ This emergence of self-awareness as an implicitly universal self-consciousness, related to an other like itself, is the germination of rationality, which can know objectively by being a standpoint that is not just subjective, but intersubjectively common.⁷⁶ Language acquisition makes this explicit, but it holds true throughout the process that brings individuals to linguistic competence. That process is equally pregnant with ethical implications, for upbringing supplants the child's initial total

dependency on others with an interdependence of implicit equals, rather than an atomistic independence.⁷⁷

Accordingly, the reciprocity of self-conscious individuals extends beyond its initiation in early childhood.⁷⁸ Remaining an enduring engagement of the self as it reaches maturity and beyond, it hardly falls into the oblivion of the earliest experiences that fail to be retained in adult memory. At the very least, any individual who does not suffer from amnesia will have a persistent memory of what it is to be conscious of oneself as a universal self-conscious, aware of other selves reflecting one's own form of awareness. For those withdrawn into isolation, this self-recognition is always ready to be reenacted in any communicative relationships they enter.

Consequently, the recollection or actuality of recognitive engagement becomes something that can always accompany self-consciousness, though not always present to mind. Even the last human on our lonely planet will retain self-awareness so long as remembrance of interactions past has not slipped beyond recall.

9.8 “Animal” versus “Human” Self-Consciousness

Insofar as self-consciousness has a nondiscursive reality, enabling prelinguistic animals and children to be self-aware, the question arises as to how “animal” and “human” self-consciousness are distinguished. Because humans are animals, not all humans have or will ever become discursive, and linguistic intelligence need not be exclusively possessed by *homo sapiens*, the question more properly concerns the difference between nondiscursive and discursive self-consciousness, whenever and wherever in the universe these forms arise. A systematic answer depends upon the investigation of intelligence and the specific psychological reality of linguistic intelligence. By way of anticipation, however, some basic distinctions can be drawn.

Although nondiscursive self-consciousness can engage in mutual desire relations establishing the universality of self-awareness, the absence of linguistic representation prevents that universal self-consciousness from having any conceptual self-understanding. Prelinguistic animals and children can be aware that they interact with other subjects who also desire their attention, but they cannot represent or communicate any concept of themselves or others. Although they may have particular understandings of one another and themselves, they cannot be aware of and desire the fulfillment of any universal ideal of self that serves as a goal and norm.⁷⁹ Prelinguistic animals and children can choose among given particular options that their situation and habituations make possible, but they

cannot aim to better themselves. They may conform to rules out of instinct, habit, or training incentives, but they cannot behave from a conception of self, prescribing who they should be.⁸⁰ Their choices may indeed lead to dispositions and circumstances that mold themselves and their future possibilities, but they cannot recognize themselves to be self-determined agents, enjoying rights and duties whose universality requires thought to be known. Accordingly, prelinguistic animals and children cannot be held accountable like discursive agents, who can understand the universal rights to which they owe respect.

Nonetheless, to the degree that linguistic intelligence cannot be acquired without prediscursive self-consciousness, the latter paves the way for “human,” discursive self-consciousness. Only that conceptual self-awareness can fulfill the Socratic injunction to “know thyself,” not in one’s given particularity, but as universally determined.⁸¹ Then mind is in a position to live a life worth living, a life pursued in recognition of true norms of conduct.

CHAPTER 10

Consciousness as Reason

Recognitive desire gives consciousness the form of reason by rendering mind certain of both its identity with its object and the shared character of its own awareness.

10.1 From Universal Self-Consciousness to Consciousness as Reason

Insofar as self-consciousness arises in reciprocally desiring the desire of another, the subject and object of consciousness become identical. Because this identity confronts each self-consciousness with another reflecting itself, the objectivity each obtains equally confers upon it the universality lying in being a particular self-consciousness relating to another no different in character. The universality and objectivity of self-consciousness arise together, for self-consciousness achieves its identity of subjectivity and objectivity by having as its object another consciousness the same as and reflecting itself.¹

Lacking linguistic intelligence, emergent recognizant self-consciousness cannot yet *conceive* its universality or the identity of subjectivity and objectivity it involves. Nonetheless, it renders consciousness rational in form by enabling mind to overcome its particularity and attain an awareness that is objective. Conscious of its own awareness being both universal and objective, mind has obtained a consciousness that possesses the basic shape of reason. Mind does not yet possess the linguistic intelligence that allows it to *think* with the certainty that its thought is universal and objective, *conceiving* objectivity as it is in truth. Instead, consciousness confronts the unity of itself with that of others and the unity of its awareness with its object. This unity resides not in the identity of concepts and objectivity, but rather in the correctness of consciousness, a correctness consisting in the

correspondence between the given content of consciousness and the phenomena as they appear.

10.2 Reason as the Unity of Consciousness and Self-Consciousness

In virtue of recognizant desire, consciousness becomes aware not just of its identity with its object, but therewith of the unity of its consciousness and self-consciousness. By being *conscious* of an object that is *another* consciousness, mind is *self-conscious* and in being conscious of itself, mind is conscious of another self-consciousness from which it is distinguished. This convergence of consciousness and self-consciousness equally comprises an awareness that consciousness is universal and objective, for consciousness knows itself to be just like its object, which is another consciousness aware in the same manner. This dual certainty brings rationality to consciousness in so far as consciousness now is certain of being a universal, intersubjectively shared standpoint to which its object conforms.

Admittedly, the object in question is just one particular object within objectivity as a whole—namely, the other self-consciousness with which the individual engages in mutual recognition. As living individuals, both participants necessarily belong to a world containing other living things as well as inanimate objects. In order for the achieved identity of consciousness and self-consciousness to comprise the standpoint of reason as consciousness, consciousness must generalize its newly attained universal self-consciousness by extending its certainty of being universal and one with its object to all objectivity.

All the psychological prerequisites for taking this move are already at hand. Consciousness need only broaden its attention to everything it confronts while maintaining the certainty of its universal self-consciousness. This move transforms consciousness into a form of reason insofar as reason apprehends objectively, thereby grasping what holds true for all knowers.² Insofar as the determinations of reason are known to be not just subjective, but equally objective, they command intersubjective validity as well. By uniting consciousness and self-consciousness and thereby becoming universal self-consciousness, mind now knows itself to have the universality and correspondence with objectivity characterizing rationality.

10.3 Reason as a Shape of Consciousness

Nevertheless, reason as consciousness is significantly different from reason as linguistic intelligence. The reciprocal recognition wherein each participant

becomes aware of itself as a universal self-consciousness need not involve any thinking or communicating of concepts. The unification of consciousness and self-consciousness is achievable simply by two individuals showing one another the desire to satisfy each other's desire. All one needs to engage in mutual recognition with another self-consciousness are the psyche's ability to express its wants and consciousness's capacity to confront and desire objects. Desiring the desire of another and giving expression to that desire does not require *conceiving* or *verbalizing* any of the terms of the relationship.

Consciousness as reason, emerging directly from the universal self-consciousness in which recognitive desire results, does not involve thought and language either. Reason as a form of consciousness comprises the immediate certainty of the identity of consciousness and self-consciousness, an identity arising when self-consciousness becomes aware of its own universality by confronting an object that is a self-consciousness like itself. This identity unites consciousness and self-consciousness insofar as mind is conscious of an object confronting it such that it thereby is conscious of itself. This identity exhibits reason insofar as the object for consciousness is another self-consciousness reflecting consciousness's own universality and correspondence with its object, rendering consciousness implicitly rational. Reason as a form of intelligence does need concepts to *theorize*, that is, to *think* the identity of its own apprehension and objectivity. Consciousness as reason, by contrast, can be *certain* of the correspondence of subject and object without conceptualizing either. Thanks to recognitive desire, consciousness gains an awareness that its own mental content matches objects independently opposing it. The self-conscious subject and its object confront one another, yet correspond, and this identity in difference is what consciousness takes as its object, giving consciousness the form of reason, of *true* awareness. Yet, because consciousness only has certainty of the immediate fit between its self-consciousness and the objectivity it confronts, its truth merely comprises *correctness*, the correspondence between the given content of consciousness and the appearance immediately facing it. Whether either pole is true in itself is something reason as consciousness leaves unexplored as it engages in observing the world confronting it.

Here consciousness observes objectivity with certainty that mind independent phenomena match its own awareness without securing that conformity through any theorizing with concepts or propositions. The correspondence of which consciousness is certain is not a theoretical correlation of concept and object. It is instead an immediate fit between the nondiscursive observation by the subject of the phenomena it opposes and the given world that is so observed.

Animals and preverbal children both provide examples of how consciousness can exhibit the form of reason without thinking or conversing. Any communal "social" behavior predicated upon the commonality of individuals operates

with certainty that one's consciousness matches that of other selves whom one confronts and with whom one interacts. To behave consciously as a member of group, be it familial or otherwise, involves some certainty that one shares in a common subjectivity, which faces one objectively in the other members with whom one unites. Similarly, any exploratory observation of the world proceeds from the premise that objectivity conforms to consciousness and can be correctly accessed by conscious awareness.

In both cases, reason as consciousness unites subjectivity and objectivity in an abstract, formal manner. The unity that has issued from recognitive self-consciousness is formal because it does not alter the given content of what is both objective and subjective.³ Insofar as the unity of consciousness and self-consciousness is the point of departure for further awareness, it only comprises the certainty that objectivity will conform to self-consciousness, whatever it happens to be. That is, reason as consciousness provides mere *correctness*, the correspondence between objectivity and subjectivity where what fits are contents that are simply given, rather than the product of any concerted theoretical activity. Unlike the correspondence of rational truth proper, which unites thought and objectivity, correctness only signifies that mind's mental content conforms to what appears given, to a phenomenon whose own truth, whose own conceptual adequacy, remains unexplored. Instead of invoking any universal, propositional reasons to justify the truth of what it observes, conscious awareness of correctness is only a subjective assurance, a mere certainty that mind's observation corresponds to what is given.

Discursive reason, reason as intelligence, operates with more than consciousness's presumption that self-consciousness and objectivity are intrinsically commensurate. Intelligence, taking the form of reason, comprehends the conceptual conformity of subjectivity and objectivity, bringing thinking and language to bear in theoretically determining what is true. Unlike correctness, which matches nondiscursive mental content with phenomena, truth, as aimed at by reason as intelligence, requires propositional relations to delineate the correspondence between theoretical conceptualization and objectivity. Whereas the subjective content of self-consciousness and the appearance of phenomena are contingent upon something else to which they are relative, concept and objectivity share an independence exhibited in the autonomy of thought and the self-subsistence of objectivity. This allows them to have an intrinsic connection rooted in being determined in and through themselves, providing for theoretical truth.⁴

Intelligent reason takes different forms which capture such truth, the unity of concept and objectivity, in varying degrees of adequacy. These involve thinking different types of universals, judgments, and syllogisms.⁵ Whatever its form, reason as intelligence always *theorizes*, conceiving objectivity by producing mental contents that are as conceptually determinate as the object to which they

correspond. The resulting truth is discursive, for mind must use language to arrive at theoretical knowledge.

Reason as consciousness, by contrast, can be certain of the correctness of its observations without theorizing, without mentally transforming them into a universal, conceptual content that it discovers in the phenomena. To be certain of the formal correspondence between what is given in its universal self-consciousness and what appears in the world, consciousness can just rely on correct observation without having anything to think or say. For this reason, awareness of correctness can be had by preverbal children and animals incapable of speech and conceptualization.

Although consciousness here arrives at a certainty of correctness lacking the truth of theoretical reason, it sets the stage for mind to gain intelligence and develop itself as discursive rationality. Before this can begin, however, consciousness as reason is left confronting the conundrums of its own effort to extend to the observation of nature at large the identity of subject and object implicit in universal self-consciousness.

10.4 Reason as Observation of Nature and of Self-Consciousness

When consciousness observes given phenomena with the certainty that objectivity is commensurate with self-consciousness, mind confronts a looming discord between the self-activity of consciousness and what it perceives and understands. Whereas the dynamics of nature subject things to an external necessity and the manifestations of life cannot reveal the inwardness of awareness, self-consciousness knows itself to be the subjectivity to which nature appears. It is just this discrepancy that made recognitive desire the avenue for achieving any abiding self-consciousness in the first place. Yet now that consciousness knows itself to be universal and implicitly congruent with what it confronts, consciousness aims to apprehend how the content of phenomena does fit mind's opposing subjectivity.

The problem presents itself in either direction that observation may take.⁶ If consciousness observes external nature with the assurance that objective process will be commensurate with conscious reflection, it discovers that the mechanism of dynamics and the organic unity of life are both incongruent with the self-active centrality of conscious subjectivity, which remains irreducible to either.

On the other hand, if consciousness attempts to find how its self-consciousness corresponds to natural phenomena, it discovers that everything it observes remains bound by the external necessitation of natural law or the internal teleology of life. In the *Phenomenology of Spirit*, Hegel points to the most extreme example of the

difficulty—phrenology's identification of dispositions of mind with bumps of the human skull. Its equation of consciousness with a bone highlights the futility of identifying the self with any phenomenal thing,⁷ including the neural architecture of the brain.

This difficulty persists even when consciousness *observes* self-consciousness as its object. One might imagine that observing self-consciousness would present an object that cannot fail to conform to universal self-consciousness. Yet because observation still confronts self-consciousness as a putatively independent given, whose relation to knowing is thus contingent, there remains an alien dimension to what should be wholly congruent with consciousness as reason.⁸ Unless the self-consciousness that is observed as an object is known only to be by entering into its relation to its observer, the presumed correspondence cannot be fulfilled. Yet, as an object, the self-consciousness under observation remains something foreign to the observing reason, at least so long as reason remains confined to a shape of consciousness, which constitutively confronts something independently given.⁹

These difficulties are symptomatic of construing truth as merely correctness, whose formal identity of subject and object, of self-consciousness and consciousness, never surmounts the givenness of subjective mental content and opposing phenomena. Mind as consciousness remains caught in this predicament, where the identity basic to rationality does not yet contain intrinsically congruent content.

Nonetheless, consciousness as reason brings mind to the threshold of a new mode of operation, where the object of awareness is itself the subject-object identity of reason.

10.5 Transition from Consciousness to Intelligence

Once consciousness becomes certain that its awareness is shared with others and correctly apprehends phenomena, mind can treat its own mental content as *both* a product of its own mental activity and as determinative of something objective. Whereas the psyche related to its mental content merely as mind's own reality and consciousness disengaged itself from the psyche's manifold to confront objectivity, mind now becomes intelligence by relating to its mental content as mind's own property as well as something objective. Intelligence is not immediately conceptual and linguistic, but the mental activity in which it consists provides the psychological reality in which discursive rationality develops theoretically and practically. Leaving behind the development of consciousness, the philosophy of mind now stands ready to secure the psychological preconditions of its own endeavor.¹⁰

Notes

Notes to the Introduction

1. Hans Jonas raises all these points in *The Phenomenon of Life: Toward a Philosophical Biology* (Evanston, IL: Northwestern University Press: 2001), pp. 128, 130.

Notes to Chapter 1

1. Immanuel Kant, *Critique of Pure Reason*, trans and ed. Paul Guyer and Allen W. Wood (Cambridge: Cambridge University Press, 1998), B274–79, 326–29.
2. See Plato, *Meno*, 81b–d, 85d–86b, in Plato, *Complete Works*, ed. John M. Cooper (Indianapolis: Hackett, 1997), 880, 886.
3. Aristotle, *De Anima*, 429a18–29, 430a17–19 in *The Complete Works of Aristotle*, vol. 1, ed. Jonathan Barnes (Princeton, NJ: Princeton University Press, 1984), 682, 684.
4. Aristotle, *Metaphysics*, 1072b15–1073a13, 1074b15–1075a4, in *The Complete Works of Aristotle*, vol. 2, ed. Jonathan Barnes (Princeton, NJ: Princeton University Press, 1984), 1695, 1698–99.
5. As Michael B. Foster observes, Aristotle’s God is the source of no other activity than his own theorizing, which terminates upon himself rather than upon the world. Nature’s energy must accordingly be held to be intrinsic to nature, arising from the active potency of natural form to realize itself. By contrast, when Judeo-Christian theology attributes an activity of will to God, nature can no longer be considered self-dependent. See Michael B. Foster, “The Christian Doctrine of Creation and the Rise of Modern Natural Science,” *Mind* 43, no. 172 (October 1934): 459.
6. See G. W. F. Hegel, *Logic: Being Part One of the Encyclopaedia of the Philosophical Sciences*, trans. William Wallace (Oxford: Oxford University Press, 1975), addition to para. 236, p. 292.

7. Nonetheless, Kant's own account of the Third Analogy of Experience presumes that the self is embodied and capable of moving about in the world. He there explains how the perception of coexisting objects is order-indifferent, unlike the perception of cause and effect, where an object that figures as a cause has some temporal priority over what state of affairs figures as its effect. To explain that order-indifference, Kant describes how it makes no difference in what order we look at different parts of a room, since the coexisting objects of that room will be perceived whether I look in one direction or another, something only possible if I am embodied in an animal organism.

8. In the consideration of the limits of artifacts, we will consider whether an individual could be initiated into linguistic intelligence through completely artificial means.

9. See Donald Davidson's analogous argument in *Subjective, Intersubjective, Objective* (Oxford: Oxford University Press, 2001), 205–20.

10. Roger Penrose is a notable example of the latter, appealing to the indeterminacy of quantum mechanics to absorb seeming spontaneities of mind into physical reality. See Roger Penrose, *The Emperor's New Mind: Concerning Computers, Minds, and the Laws of Physics* (New York: Oxford University Press, 1989).

11. See Hans Jonas, *The Phenomenon of Life: Toward a Philosophical Biology* (Evanston, IL: Northwestern University Press: 2001), 130.

12. As Jonas points out, "the concept of the epiphenomenon . . . is meant to denote an effect which, unlike all other effects in nature, does not consume the energy of its cause; it is not a transformation and continuation of such energy, and therefore, again unlike all other effects, it cannot become a cause itself . . . it adulterates the clean concept of matter by charging it with an occult faculty, that of generating the 'epiphenomenon.'" Jonas, *The Phenomenon of Life*, 128, 130.

13. Foster, "The Christian Doctrine of Creation."

14. G. W. F. Hegel, *Science of Logic*, trans. A. V. Miller (New York: Humanities Press, 1976), 558–69.

15. Leibniz realizes this in his theory of monads, which stand in the completely external relationship of mechanism while being completely determined in and through themselves, irrespective of their relation to other.

16. Popper observes that chemistry resists reduction to physics insofar as chemical relationships cannot be accounted for without invoking a history of the formation of different elements and molecules, that is, a cosmogony or even a cosmogeny. Moreover, he maintains, the theory of the origin of heavier elements in supernovae explosions requires introducing a harmony between gravitation and nuclear forces so that the gravitational attraction of stellar accumulations of hydrogen can overcome the electrical repulsion of nuclei and fuse them through the working of nuclear forces. In both respects, emergent properties come into play. See Karl R. Popper, *The Open Universe: An Argument for Indeterminism*, from the *Postscript to the Logic of Scientific Discovery* (Totowa, NJ: Rowman & Littlefield, 1982), 142–44.

17. As Popper observes, although the closedness of the world of Newtonian mechanics presupposed by Laplace became superseded by an openness to irreducible electromagnetic processes, as well as subsequently to probabilistic aspects of quantum mechanics, most physicists, including Einstein, still rejected a causally open universe. See Popper, *The Open Universe: An Argument for Indeterminism*, from the *Postscript to the Logic of Scientific Discovery*, 124.

18. Significantly, when Aristotle analyzes such chance occurrence the convergence of independent causal chains always involves at least one in which some purpose determines events, which would exclude any Laplacian reduction of chance to mechanical determinism. As Aristotle writes, "It is clear then that chance is an accidental cause in the sphere of those actions for the sake of something which involve choice." See Aristotle, *Physics*, Book 2, chapter 5, 197a6–7, in *The Complete Works of Aristotle*, vol. 1, ed. Jonathan Barnes (Princeton, NJ: Princeton University Press, 1984), 336.

19. J. Melvin Woody argues in this vein that finite freedom presupposes the partial determinism of the sort provided by probabilistic quantum mechanics, "since free choice is quite consistent with incomplete causal determination and would be unintelligible without it." J. Melvin Woody, *Freedom's Embrace* (University Park: The Pennsylvania State University Press, 1998), 255–56. Yet, room for additional determination is already provided by nonprobabilistic mechanical and chemical processes, both because they are always externally determined and because they fail to completely individuate the factors they involve. Moreover, the incomplete determination of probabilistic laws provides no greater resource for specifying what it leaves undecided than do more traditional laws of matter for specifying what they cannot individuate.

20. Popper points out how indeterminism, either in the convergence of two independent causal chains or in the absolute chance introduced by quantum mechanics, is thus "necessary but insufficient" to allow for either prehuman animal psychology or human freedom. See Popper, *The Open Universe: An Argument for Indeterminism*, from the *Postscript to the Logic of Scientific Discovery*, 125–27.

21. As B. F. Skinner notes, such "operant conditioning" can be seen as an extension of natural selection, such that "where inherited behavior leaves off, the inherited modifiability of the process of conditioning takes over." Cited by Daniel Dennett in *Kinds of Minds: Toward an Understanding of Consciousness* (New York: Basic Books, 1996), 85.

22. Charles Taylor analyzes this problem at length in *The Explanation of Behavior* (Amherst, NY: Prometheus Books, 1964).

23. See Willard Van Orman Quine, *Word and Object* (Cambridge, MA: The MIT Press, 1960), 29ff.

24. As J. N. Findlay observes, "The behaving being may not be responding to anything actually present in the situation, but to something present in similar situations in the past, or to something quite hidden or connected with the present situation only by a long track or route. It may even be something wholly general such as food or a mate, or something wholly non-existent and imaginary." See J. N. Findlay, *Psyche and Cerebrum* (Milwaukee, WI: Marquette University Press, 1972), 6.

25. As Findlay observes, "All these are points which require indefinite testing to establish what they portend." See Findlay, *Psyche and Cerebrum*, 7.

26. As Popper observes, an animal perceives what is relevant to its problem situation, which depends not just on its external circumstances, but its inner state, given by its genetic constitution and, in the case of humans and some higher animals, personal, conscious preferences and decisions. See Karl Popper and John C. Eccles, *The Self and Its Brain: An Argument for Interactionism* (London: Routledge, 1998), 92–93.

27. For further discussion of these limits of mechanistic explanation, see Charles Taylor, *Human Agency and Language: Philosophical Papers*, vol. 1 (Cambridge: Cambridge University Press, 1985), 165–69.

28. As we shall see in chapter 2, the cybernetic theory of mind falls prey to the same self-refutation.

29. As Dennett reports, "An old joke about behaviorists is that they don't believe in beliefs, they think that nothing can think, and in their opinion nobody has opinions." Dennett, *Kinds of Minds*, 120.

30. John Macmurray, *The Self as Agent* (Amherst, NY: Humanity Books, 1991), 125.

31. As Kant writes, "Suppose that for a being possessed of reason and a will the real purpose of nature were his preservation, his welfare, or in a word his *happiness*. In that case nature would have hit on a very bad arrangement by choosing reason in the creature to carry out this purpose. For all the actions he has to perform with this end in view, and the whole rule of his behavior would have been mapped out for him far more accurately by instinct; and the end in question could have been maintained far more surely by instinct than it ever can be by reason." Immanuel Kant, *Groundwork of the Metaphysic of Morals*, trans. H. J. Paton (New York: Harper & Row, 1964), 62–63.

32. As Hans Jonas observes, because evolution operates upon cumulative randomly generated adaptations, starting with the most simple of living organisms, the likelihood of the genesis of complex plants and animals is incomparably greater than that of monkeys typing out the works of Shakespeare at some point in their random pecking. In the latter case, each engagement of typing remains undetermined by prior performance, unlike evolution, whose random mutations always proceed from the results of previous natural selection. See Hans Jonas, *The Phenomenon of Life: Toward a Philosophical Biology* (Evanston, IL: Northwestern University Press: 2001), 43–44.

33. Dennett, *Kinds of Minds*, 20–23.

34. *Ibid.*, 25.

35. *Ibid.*, 25–26.

36. *Ibid.*, 68–69.

37. Even though logical thought has intentionality in the sense of being about something, namely, thinking itself, thinking logical determinacy depends, psychologically speaking, on mind being conscious of the rational objectivity within which linguistic intelligence proceeds. The intentionality of logic still overcomes the opposition of consciousness in that what logic is about is the thinking that thinks itself, where the difference between knowing and its object has been overcome.

38. See, for example, section 3, "Of the Association of Ideas," in David Hume, *An Inquiry Concerning Human Understanding* (New York: Bobbs-Merrill, 1955), 31ff.

39. See Dennett, *Kinds of Minds*, 85.

40. Moreover, as Errol Harris observes, although a theory of association may provide for the repeated appearance of some past pattern of behavior, "it cannot explain the recognition of it as past, still less the identification of it as the particular experience which occurred at a particular past time." See Errol E. Harris, *The Foundations of Metaphysics in Science* (Atlantic Highlands, NJ: Humanities Press, 1993), 422.

41. As Dennett notes, such sensitivity can be exhibited by single-celled organisms, plants, fuel gauges, photographic film, and other things that respond differentially to something else, but such discriminating response hardly qualifies as "sentience." Given his mechanistic reduction of life, Dennett fails to distinguish between the sensitivity of plants and unicellular organisms and the differential response of machines. See Dennett, *Kinds of Minds*, 64.

42. Significantly, Dennett never manages to explain how sentience is distinguished from sensitivity. He invokes the replacement of biochemical signaling by swifter electrical activity in nerve fibers and the different geometries nervous systems make possible (*Kinds of Minds*, 67), and finally asserts that the intricate physiological structure of the neural network with its capacity for controlling the body just is consciousness (ibid., 73), without ever specifying how any of this entails something qualitatively different from sensitivity. Dennett's further appeal to the transition from proximal (neighboring) to distal (distant) discrimination (ibid., 82) provides nothing to transform sensitivity into sentience. No answer is supplied by Dennett's later introduction of "Popperian creatures" which have an "inner environment" to "inwardly" try out behavioral options. This "preselection" either reverts to bodily reactions to stimuli (e.g., nausea, vertigo, fear, and trembling) or simply assumes intentionality by invoking an inner environment with information *about* the outer environment (ibid., 88). Nor does Dennett explain consciousness when he claims that mental contents become conscious by winning the competition against other mental contents for domination in the control of behavior. How achieving long-lasting effects confers "intentionality" on mental contents remains as inexplicable as before (ibid., 155). Dennett effectively admits his failure, confiding that the prospect of discovering a definite threshold of sentience is both "unlikely" and "morally unappealing" (ibid., 96–97).

43. Ramachandran makes this mistake in claiming that "the action of nerve cells in the brain, the patterns of firing, represent objects and events in the external world." See V. S. Ramachandran, *A Brief Tour of Human Consciousness* (New York: Pi Press, 2004), 25. These patterns neither relate to themselves nor refer themselves to something else in so doing, as intentionality requires.

44. As Searle observes, so long as theorists begin with either derived intentionality (as in words or sentences which owe their intentionality to the linguistic agents who use them) or as-if intentionality (as Dennett metaphorically ascribes to "mother nature"), reference remains a mystery, making it seem that there has to be a homunculus somewhere to impose intentionality on phenomena. See John R. Searle, *Mind, Language, and Society: Philosophy in a Real World* (New York: Basic Books, 1998), 98.

45. So Dennett describes minds as the "control systems of bodies." See Dennett, *Kinds of Minds*, 68.

46. Ibid., 29, 53.

47. The indifference of form and matter in artifacts is relative, rather than absolute, insofar as only a certain range of materials may be fit for taking on a certain design and fulfilling the function of that design (e.g., a hammer may be constructed out of sufficiently hard, shatterproof materials, but not out of those too brittle, too flexible, or too penetrable).

48. As Dennett observes, although what lies between "transducers and effectors" might be accomplished by media-neutral processes, when transducers and effectors pervade every reach of animal neural control systems, the boundary between "information-processing system" and body collapses, eliminating the "multiple realizability" of "media-neutrality." See Dennett, *Kinds of Minds*, 73–75.

49. Ibid., 77.

50. Ibid.

51. Ibid., 67.

52. Moreover, with the emergence of intelligent life, natural selection transcends itself to the extent that different projects for life can be advanced, critiqued, and repudiated without depending upon extinction for their removal. As Popper observes, the emergence of the rational mind through natural selection makes possible such nonviolent cultural evolution (Popper and Eccles, *The Self and Its Brain*, 210) in which further natural selection gets largely suspended among those rational animals.

Notes to Chapter 2

1. The following analysis expands upon the arguments of an earlier investigation of mine, "Hegel, Mind, and Mechanism: Why Machines Have No Psyche, Consciousness or Intelligence," first published in the *Bulletin of the Hegel Society of Great Britain* 59-60 (2009): 1-18.

2. Daniel C. Dennett, *Kinds of Minds: Toward an Understanding of Consciousness* (New York: Basic Books, 1996), 50-54. Dennett's solution, of course, presumes that living organisms can be thought of as artifacts, a view whose questionability has earlier been exposed.

3. As Popper observes, Turing's challenge only concerns external verbal behavior, with abstraction from any subjective experience. In this respect, it could be said to beg the question, for if mind always involves subjective activity, intelligent verbal behavior is never merely objective or describable in solely third-person terms. See Karl Popper and John C. Eccles, *The Self and Its Brain: An Argument for Interactionism* (London: Routledge, 1998), 208.

4. The disanalogy applies equally to the biological reality of the brain. As Popper points out, whereas computers compute, brains function "to guide and balance an organism and help it to stay alive." *Ibid.*

5. For these reasons, Aristotle excludes artifacts from being substance proper, whose fundamental independence requires that it be defined not as a mere composite of form and matter, but as form and actuality, where form is active and self-realizing. See Aristotle, *Metaphysics*, Book Zeta, chapters 3 and 4 and Book Theta, chapter 8.

6. Charles Taylor, *Human Agency and Language: Philosophical Papers*, vol. 1 (Cambridge: Cambridge University Press, 1985), 193-94.

7. *Ibid.*, 193.

8. *Ibid.*, 196-97.

9. *Ibid.*, 165.

10. Hans Jonas, *The Phenomenon of Life: Toward a Philosophical Biology* (Evanston, IL: Northwestern University Press, 2001), 119.

11. *Ibid.* As Jonas observes, a "pilot operates a certain switch not because he has received a certain sense-message but because he wishes to keep the torpedo on the target, and *in the light of this purpose* he takes the occurrence of certain perceptions as the occasion for performing certain actions conducive to the end in view." *Ibid.*, 119.

12. *Ibid.*, 119-20. As Jonas points out, the cybernetic model of mind "reduces animal nature to the two terms of sentience and motility, while in fact it is constituted by the triad of perception, motility, and emotion." *Ibid.*, 126.

13. For this reason, as Popper duly points out, computers are not problem solvers, but only “instrumental in” problem solving. See Karl Popper, *The Open Universe: An Argument for Indeterminism*, from the *Postscript to the Logic of Scientific Discovery* (Totowa, NJ: Rowman & Littlefield, 1982), 150.

14. This is why reckoning can be described as being devoid of thought, of genuine conceptual determination. Hegel depicts this thoughtlessness of a mechanistic approach to logic in the introduction of his *Science of Logic* as follows: “Its determinations are accepted in their unmoved fixity and are brought only into an external relation with each other. In judgements and syllogisms the operations are in the main reduced to and founded on the quantitative aspect of the determinations; consequently everything rests on an external difference, on mere comparison and becomes a completely analytical procedure and mechanical [*begriffloses*] calculation. . . . Consequently, this thinking has been equated, not incorrectly, with reckoning, and reckoning again with this thinking. In arithmetic, numbers are regarded as devoid of any concrete conceptual content, so that apart from their wholly external relationship they have no meaning, and neither in themselves nor in their interrelationships are thoughts.” G. W. F. Hegel, *Science of Logic*, trans. A. V. Miller (New York: Humanities Press, 1976), 52–53.

15. For further analysis of the relation between universality, particularity, and individuality, and of how their relationship comprises self-determination, see Richard Dien Winfield, *From Concept to Objectivity: Thinking through Hegel’s Subjective Logic* (Aldershot, UK: Ashgate, 2006), chapter 4, 51–65.

16. Hubert L. Dreyfus, *What Computers Still Can’t Do: A Critique of Artificial Reason* (Cambridge, MA: The MIT Press, 1992), xlii.

17. *Ibid.*, xxxviii.

18. Dreyfus presumes that pragmatic considerations underlie all knowledge, yet this claim is self-defeating, since any evaluation of whether putative knowledge serves some interest must be determinable apart from pragmatic concerns if vicious circularity is to be avoided. So, for example, Dreyfus offers as an *abiding* fact that “there are in the last analysis no fixed facts . . . since human beings produce facts, the facts themselves are changed by conceptual revolutions.” See Dreyfus, *What Computers Still Can’t Do*, 282.

19. This is why Hegel sees fit to characterize the atomism of Leibniz’s *Monadology* as paradigmatic of mechanism. See Hegel, *Science of Logic*, 712.

20. This difficulty becomes evident in pattern recognition, which depends on recognition of generic differences by means of a paradigm case. If all inputs are atomistically given, however, there can be no way of deciding which counts as the paradigm, unless one can appeal to considerations of relevance, which, as Dreyfus maintains, involves interpretation transcending information processing. See Dreyfus, *What Computers Still Can’t Do*, 294.

21. A notable exception is Thomas Hobbes, who identifies reasoning and reckoning, writing in chapter 5 of *Leviathan* that “When a man *Reasoneth*, hee does nothing else but conceive a summe totall, from *Addition* of parcels; or conceive a Remainder from *Substraction* of one summe from another. . . . For Reason, in this sense, is nothing but *Reckoning* (that is, Adding and Substracting) of the Consequences of generall names agreed upon, for the *marking* and *signifying* of our thoughts.” Hobbes is oblivious to how this very claim is hardly a matter of reckoning, which is incapable of determining the

concept of reasoning, reckoning, or anything else. See Thomas Hobbes, *Leviathan*, ed. C. B. Macpherson (Harmondsworth, UK: Penguin, 1968), 110, 111.

22. Plato, *Republic*, Book 6, 510b–c, in *Complete Works*, ed. John M. Cooper (Indianapolis: Hackett, 1997), 1131–32. Dreyfus cites this discussion, despite identifying the “Platonic project” as committed to reducing reasoning to calculation. See Dreyfus, *What Computers Still Can’t Do*, 68.

23. Immanuel Kant, *Critique of Pure Reason*, trans. Paul Guyer and Allen W. Wood (Cambridge: Cambridge University Press, 1998), A133/B172, 268.

24. So Wittgenstein muses in his *Philosophical Investigations*, “85. A rule stands there like a sign-post.—Does the sign-post leave no doubt open about the way I have to go? Does it shew which direction I am to take when I have passed it; whether along the road or the footpath or cross-country? But where is it said which way I am to follow it? . . . And if there were, not a single sign-post, but a chain of adjacent ones . . . is there only *one* way of interpreting them?” Ludwig Wittgenstein, *Philosophical Investigations*, 3rd ed., trans. G. E. M. Anscombe (New York: Macmillan, 1953), 39. Dreyfus cites Wittgenstein’s argument to expose how computer theorists, in their quest to render all intelligence a rule-governed mechanism, must assume an immediate, self-evident interpretation that enables them to input “context-free, completely determinate data which require no further interpretation in order to be understood.” See Dreyfus, *What Computers Still Can’t Do*, 204.

25. As Kant puts it, “The power of judgment is a special talent that cannot be taught but only practiced.” Kant, *Critique of Pure Reason*, A133/B172, 268.

26. Although Kant recognizes that “metaphysics,” or knowledge obtained by pure reason, must take the form of synthetic a priori judgments, he retains the view that concepts are lifeless, fixed terms, governed by the principle of contradiction. Accordingly, he must look beyond reason for something to provide nonanalytic content and this he finds in the necessary relations between sensibility and understanding in experience, which allow different concepts to be necessarily connected in respect to knowledge of empirical objects. What Kant notoriously fails to recognize is that his own account of the conditions of experience involves a cognition that is synthetic, necessary, and not restricted to objects of experience.

27. See Hegel, *Science of Logic*, 685, where Hegel critiques the “Leibnizian application of the calculus of combinations and permutations to the syllogism and to the combination of other notions” for operating “as though in rational combinations . . . a content still retained the same determinations *that it possesses when fixed in isolation*.”

28. Descartes, *Discourse on Method, and Meditations*, trans. Laurence J. LaFleur (Indianapolis: Library of Liberal Arts, 1960), 36.

29. Dreyfus suggests that Descartes’ argument is destroyed by the ability of a modern computer to respond to an indefinite number of situations. This alleged ability, however, transcends the limitations of machine intelligence, which, as Dreyfus himself points out, is restricted to situations susceptible of computational reduction. Dreyfus instead claims that the real limitation of computers lies in their inability to engage in practical activity, an inability based in their lack of an “involved, situated, material body” endowed with an “indeterminate, global anticipation” manifest both in our nervous system and our experienced power to move objects in the world. See Dreyfus, *What Computers Still Can’t Do*, 235–37.

30. Descartes concludes from the particularity of mechanism that reason must be possessed by an immaterial soul. Owing to his mind/body dualism, and the mechanical reduction of objectivity it entails, he neglects to examine the possibility that reason could be embodied in a living animal organism that is irreducible to any mechanism.

31. For this reason, when Dreyfus asks, "Is an exhaustive analysis of human reason into rule-governed operations on discrete, determinate, context-free elements possible?" (Dreyfus, *What Computers Still Can't Do*, 303), a resounding "No!" must follow from the very existence of philosophy.

32. Even if one were to accept Dennett's claim that natural selection gives rise to functional artifacts, this does not eliminate the fact that programmer's and hardware designers engage in an activity transcending the limits of machine "intelligence."

33. Although, as Dreyfus points out, (see Dreyfus, *What Computers Still Can't Do*, 166) proponents of artificial intelligence aim to program computers to do this translating job themselves, it is doubtful that it could ever be done without a "human," or more generally, a "natural" mind. After all, any program that allows a computer to perform the "translation" in question would itself have to be supplemented with the same transition from meaningful information to meaningless bits of input.

34. See Dreyfus, *What Computers Still Can't Do*, 198–202. As Dreyfus there observes, what gets omitted in order to formalize syntactic theory is how people are able to use their language, which includes on occasion breaking rules and coining new usages without communication failure.

35. Jonas, *The Phenomenon of Life*, 124.

36. Ibid., 125.

37. Ibid., 134.

38. This reflexivity applies to mind more globally than that particular form highlighted in Charles Taylor's characterization of humans as self-interpreting animals, who are partly constituted by their self-understanding. Charles Taylor, *Human Agency and Language*, 189. As we shall see, although minds with linguistic intelligence are, in important respects, determined by what they know themselves to be, this discursive reflexivity is both phylogenetically and developmentally preceded by other forms of mental reflexivity that make self-understanding possible. For this reason, computers lack mental self-activity not just because they lack self-understanding, but because they cannot feel, perceive, desire, and so on.

39. Searle uses this example to show, contra Fodor, that "nonintentional causal relations will always be insufficient to account for intentionality." See John R. Searle, *Mind, Language, and Society: Philosophy in the Real World* (New York: Basic Books, 1998), 91.

40. Errol E. Harris points this out in *The Foundations of Metaphysics in Science* (Atlantic Highlands, NJ: Humanities Press, 1993), 383. As he observes, the same problem applies to those who would relate internal schemata in the brain to external things they are supposed to replicate. A model "cannot qua model apprehend that of which it is a model, much less that it is a model of something other than itself. Such apprehension . . . implies a separate subject (the ghost once more) who cognizes directly both the archetype and the model and can relate them as such." Harris, *The Foundations of Metaphysics in Science*, 377.

41. Harris gives this example in *The Foundations of Metaphysics in Science*, 384.

42. Searle makes these points in arguing that “all derived intentionality is derived from the intrinsic.” See Searle, *Mind, Language, and Society*, 94.

43. Harris points this out in *The Foundations of Metaphysics in Science*, 347.

44. As Harris notes, the thermostat involves a transfer of energy, but not of information, strictly speaking, since nothing gets apprehended. The thermostat is set into action by differences in temperature, but it does not perceive these differences. See *ibid.*, 381–82.

45. This absence of self-relation is indicative of how a feedback mechanism differs from the self-activity of a living organism. As Jonas observes, “A feedback mechanism may be going, or may be at rest: in either state the machine exists. The organism has to keep going, because to be going is its very existence . . . it is concerned in existing. There is no analogue in the machine to the instinct of self-preservation—only to the latter’s antithesis, the final entropy of death.” Jonas, *The Phenomenon of Life*, 126.

46. This refers to remarks made by Kenneth Westphal in the discussion following delivery of my paper, “Hegel, Mind, and Mechanism: Why Machines Have No Psyche, Consciousness or Intelligence” at the Hegel Society of Great Britain conference held at Oxford, September 2, 2008.

47. Taylor, *Human Agency and Language*, 189.

48. This is different from the “feedback” operating when a person writes with a pencil. As Error Harris observes, when I pick up a pencil, my arm movement is regulated by constant feedback to the muscles concerned of its change of position, which can be registered in proprioceptive sensation without being consciously perceived. Yet the pencil must be seen, which involves more than feedback, or, for that matter, the mere occurrence of retinal images. See Harris, *The Foundations of Metaphysics in Science*, 381.

49. Mind is treated in this way, Taylor notes, by the dualist “old metaphysical view” of awareness as an inner medium of representation which monitors what goes on in our bodies, rendering consciousness as representation, separable from the processes which it monitors. Taylor, *Human Agency and Language*, 200. Searle analogously points out the mistake of treating our conscious states as something known by a separate special faculty of “introspection,” which retains the problematic mechanistic external distinction between object perceived and act of perceiving. See Searle, *Mind, Language and Society*. Only after mind–body dualism is left behind can mind be comprehended as self-activity, irreducible to artificial intelligence. Then, when mind monitors the body, it reflexively monitors its own embodiment. Taylor himself treats consciousness as representation, maintaining that the crucial difference between men and machines is not consciousness, but the “significance feature,” whereby things have significance for us nonrelatively. Taylor, *Human Agency and Language*, 201. Yet because consciousness has a reflexivity of its own, transcending the external relations of mechanism, it would be more correct to acknowledge that consciousness comprises an activity in which machines can never engage, but that is open to men, as well as brute animals.

50. Searle points this out in *Mind, Language, and Society*, 72.

51. Taylor, *Human Agency and Language*, 189–90.

52. *Ibid.*, 191.

53. See Spinoza, *Ethics*, Part 5, Corollary to Proposition 3: "So the more an emotion is known to us, the more it is within our control, and the mind is the less passive in respect of it." Spinoza, *Complete Works*, trans. Samuel Shirley (Indianapolis: Hackett, 2002), 366.

54. Taylor, *Human Agency and Language*, 191.

55. Because the inputs enter as independently determined, the "significance" factor drops out of their processing. Thus, as Taylor notes, essential to the utility of computing machines is that we can operate them "without reference to the significance feature." Taylor, *Human Agency and Language*, 200. Yet that equally renders them disanalogous to the reflexive self-activity constitutive of mind.

56. In this respect, the role of the implicit/explicit distinction is not restricted to emotions. Taylor, noting how formulating the significance of something, moving from an implicit to an explicit understanding about it, alters it, presumes that this applies to what is an object for a practical agent, whose objects, be they emotions or projects, owe their character to how that agent understands him- or herself. See Taylor, *Human Agency and Language*, 198. Yet, the implicit/explicit distinction can also be applied to the various shapes of consciousness, insofar as when consciousness takes cognizance of how its own activity determines what it takes its object to be, its object gets altered. Hegel formulates the general path of this alteration in the introduction to his *Phenomenology of Spirit*. See G. W. F. Hegel, *Phenomenology of Spirit*, trans. A. V. Miller (Oxford: Oxford University Press, 1977), 54–56.

57. This connection is the basis of Husserl's phenomenological analysis of consciousness, which accounts for different mental contents in terms of the mental acts that are constitutive of them. Husserl, however, ascribes to phenomenological analysis a global epistemological significance, equating the standpoint of consciousness with knowing *per se*. Instead of properly treating the phenomenology of consciousness as a part of philosophical psychology, Husserl makes the fatal move of transcendental philosophy, treating a privileged description of the structure of knowing as an epistemological foundation. What always remains beyond examination and critique is the knowing of knowing performed by the transcendental philosopher. For a classic statement of this errant move, see Edmund Husserl, *Cartesian Meditations: An Introduction to Phenomenology*, trans. Dorion Cairns (The Hague: Martinus Nijhoff Publishers, 1960).

58. Whether cyborgs, entities that combine machines with a living organism, can qualify as persons is another matter, which will be illuminated by the investigation of the connection of mind and life.

59. As Taylor observes, if the paradigm of machine modeled explanations of human performance is to have any future, we will "have to discover how processes analogous to machine computations could combine with others to produce real action." Taylor, *Human Agency and Language*, 204.

60. So Jerry Fodor writes in *The Language of Thought*, "It seems increasingly likely that there are nomologically possible systems other than organisms (*viz.* automata) which satisfy the kind of predicates of psychology but which satisfy no neurological predicates at all." See J. A. Fodor, *The Language of Thought* (New York: Crowell, 1975), 17–18. Taylor cites this passage in *Human Agency and Language*, 209.

61. Taylor discusses this point in *Human Agency and Language*, 209–10.

Notes to Chapter 3

1. The qualification of “related” rather than the “same” kind allows for hybrid as well as mutated offspring.

2. Kant attempts to grasp this self-actualizing process by describing the living thing as a natural purpose that is “both cause and effect of itself,” (Kant, *Critique of Judgment*, 249, AK 371) but in three different respects that correspond to the three basic life functions of reproduction, metabolism, and organic unity. The organism is cause of itself in its species being by producing another organism of the same species. Second, it ceaselessly preserves itself as an individual through the metabolic activity whose growth process is equivalent to generation since it assimilates external matter and gives it the character peculiar to its species. Third, the organism produces itself in that its organs function in a mutual dependence where the preservation of each part serves that of the others. Kant, *Critique of Judgment*, 249–50, AK 371.

3. Michael B. Foster, *The Political Philosophies of Plato and Hegel* (Oxford: Oxford University Press, 1968), 2.

4. As Foster points out, there is equally no inconsistency in maintaining that the soul involves an organic, natural process, while having a unity that is more than organic. Foster, *The Political Philosophies of Plato and Hegel*, 4–5.

5. As Hegel points out, because organic unity coalesces with itself, realizing individuality, life is essentially something alive, a living thing. See G. W. F. Hegel, *Logic: Being Part One of the Encyclopaedia of the Philosophical Sciences*, trans. William Wallace (Oxford: Oxford University Press, 1975), para. 216, 280.

6. Once so developed, organs may be transplanted into another organism wherein they may be successfully integrated, provided they play their role in the complementary functioning of its self-renewing life process.

7. Foster, *The Political Philosophies of Plato and Hegel*, 189.

8. Ibid., 14, 190. This suggests that mind cannot be an organ entirely subsumed under organic unity if mind at all presides over its embodiment.

9. As Hegel points out, the elementary powers of objectivity, mechanism, and chemism are always poised to begin their work upon the organic body and life is a constant battle against them. See Hegel, *Logic*, addition to para. 219, 281. In a similar vein, Errol Harris observes that life is always at work minimizing entropy, always seeking to uphold a greater degree of complexity against breakdown by inorganic forces. See Errol Harris, *The Foundations of Metaphysics in Science* (Atlantic Highlands, NJ: Humanities Press, 1993), 387.

10. For this reason, Kant can describe the indwelling purpose of the living thing as comprising an idea that must determine a priori everything contained in the thing. Kant, *Critique of Judgment*, 252, AK 373. Unlike the form of an artifact, which is imposed upon a given material, whose individuality is independently given, the active form or self-realizing purpose of the organism pervades its individuality, generating its material together with its configuration. For this reason, there can be no blueprint of a living organism. This is evident in how DNA functions. If it did figure as a blueprint, all cells having the same DNA would have the same form and retain it throughout their life. Yet all cells in an organism

share the same DNA, despite being differentiated into distinct types of cells belonging to different organ systems, just as the organism undergoes its own morphological and material development, despite retaining the same DNA throughout that process.

11. Kant, *Critique of Judgment*, 252, AK 373.

12. Ibid., 253–54, AK 374.

13. This minimal organic structure comprises the living cell which, as Evan Thompson explains, “is a self-organizing network of biochemical reactions that produces a membrane boundary that regulates external boundary conditions and makes possible the internal reaction network.” See Evan Thompson, *Mind in Life: Biology, Phenomenology, and the Sciences of Mind* (Cambridge, MA: Harvard University Press, 2007), 260, and for an extended discussion of chemical models that issue in this minimal organic structure, *ibid.*, 107–18.

14. Kant, *Critique of Judgment*, 253, AK 373.

15. See Aristotle, *Physics*, Book 2, chapter 8, 199b30, in *The Complete Works of Aristotle*, vol. 1, ed. Jonathan Barnes (Princeton, NJ: Princeton University Press, 1984), 341.

16. Foster, *The Political Philosophies of Plato and Hegel*, 14.

17. Michael B. Foster, “Christian Theology and Modern Science of Nature—Part 1: Paganism and Rationalism in Greek Philosophy,” *Mind* 44, no. 176 (October 1935): 464.

18. Kant, *Critique of Judgment*, 253, AK 373.

19. Ibid., 254, AK 374–75.

20. Hans Jonas, *The Phenomenon of Life: Toward a Philosophical Biology* (Evanston, IL: Northwestern University Press, 2001), 81–84.

21. Jonas, *The Phenomenon of Life*, 97–98.

22. Michael B. Foster develops these points in “Christian Theology and Modern Science of Nature—Part 1: Paganism and Rationalism in Greek Philosophy,” 458.

23. As Hegel observes, the result of metabolism is not, as in chemical process, a neutral product in which the independence of the opposing reagents is merged. Rather, in metabolism, the living being only coalesces with itself in its relation to the other. See Hegel, *Logic*, addition to para. 219, 281.

24. Hegel points out that whereas the living thing maintains itself by negating the specific nature of its other, thereby sustaining life’s persistent unrest, chemical activity extinguishes itself in reactions where, for example, acid and alkaline chemicals lose their quality and either get combined in the neutral product of a salt or revert to an abstract radical. See G. W. F. Hegel, *Philosophy of Nature*, vol. 3, ed. and trans. M. J. Petry (London: George Allen and Unwin, 1970), addition to para. 363, 152.

25. Even when an organism preys upon another living thing, it gets digested only by being first killed and reduced to inanimate material. Otherwise it lives on as a parasite.

26. Kant, *Critique of Judgment*, 253, AK 374.

27. This pervasion has some limits to the extent that some of the genetic nuclear material of a cell remains largely unaltered during the lifespan of a unicellular organism, just as the genetic nuclear material of nerve cells in animals largely remains constant during the life of a metazoic, multicellular organism. Jonas discusses this in appendix 3, 97–98, of his *The Phenomenon of Life*.

28. Hans Jonas analyzes all these discrepancies between metabolism and machine inflow and outflow in 76n13 of his *The Phenomenon of Life*.

29. Ibid.

30. Kant, *Critique of Judgment*, 250, AK 371.

31. Jonas points out that in crystals, “the form is inseparably allied to the persistence of the material,” in contrast to metabolic growth, where the active form of the organism sustains itself through a continual exchange of material. See Jonas, *The Phenomenon of Life*, 77.

32. Kant, *Critique of Judgment*, 250, Ak. 371.

33. Where reproduction occurs through asexual cell mitosis, offspring are clones. The members of such a species are distinguished only by their material difference to which metabolic and environmental histories may add some distinguishing features, until mutations or other intracellular transformations alter the character of the dividing cells so much as to produce a new organic type. By contrast, sexual reproduction ordinarily produces uniquely differentiated individuals who nevertheless retain a common species or specific hybrid form so long as organisms are limited in the range of other life forms with which they can sexually reproduce. Without that limitation, the relative regularities of species and hybrids would give way to a flux of offspring forms, reflecting only their immediate parentage.

34. Foster, “Christian Theology and Modern Science of Nature—Part 1: Paganism and Rationalism in Greek Philosophy,” 446.

35. Ibid., 463–64.

36. As Popper observes, the genetic code only serves a biological function by being translated, that is, leading to the synthesis of proteins “whose structure is laid down by the code.” Yet, because, as Jacques Monod points out, cells translate their genetic code through cellular machinery consisting of “‘macromolecular components *which are themselves coded in DNA*’ . . . the code cannot be translated except by using certain products of its translation. This constitutes a really baffling circle: a vicious circle, it seems, for any attempt to form a model, or a theory of the genesis of the genetic code” that presumes that explanation requires an efficient causal explanation or an appeal to making. See Karl Popper, *The Open Universe: An Argument for Indeterminism*, from the *Postscript to the Logic of Scientific Discovery* (Totowa, NJ: Rowman & Littlefield, 1982), 147–48.

37. As Harris observes, living organisms minimize entropy, “imposing order on relatively disordered matter . . . extracting message from noise, as well as transmitting it . . . in self-reproduction.” See Harris, *The Foundations of Metaphysics in Science*, 387.

38. Popper, *The Open Universe*, 147.

39. John Macmurray alludes to this problem, maintaining that mind can be characterized “as neither a substance nor an organism, but a person.” See John Macmurray, *The Self as Agent* (Amherst, NY: Humanity Books, 1991), 37. Whereas an organism involves “a harmonious balancing of differences . . . a dynamic equilibrium of functions maintained through a progressive equilibrium of elements within the whole” (ibid., 33), as Kierkegaard, Comte, et al. realized, “an organic conception of the personal is inadequate . . . for the process of the personal life generates a tension of opposites which can be resolved not by reconciliation, but only by a choice between them” (ibid., 36), that is, by a central ruling agency belonging to the whole over which it presides.

40. As Hegel points out, the process of reproduction relates the organism as a whole individual to its species being. See Hegel, *Philosophy of Nature*, para. 376, 442–43. In order for this relation to be a genuinely subjective self-relation, the organism would have to equalize both relata, enabling it to be self-related in relating to its species. Reproduction, however, offers the living thing little other way to surrender its individuality and unite with its species being than by dying, canceling its own reality rather than becoming a universal individual.

41. Plato, *Republic*, Book 2, 369b–372d, in Plato, *Complete Works*, ed. John M. Cooper (Indianapolis: Hackett, 1997), 1008–11.

42. Foster, *The Political Philosophies of Plato and Hegel*, 19. In this respect, Foster observes, an artifact does not contain the art by which it is produced, in contrast to a political association, which contains its artificers within itself. Foster, *The Political Philosophies of Plato and Hegel*, 31. Strictly speaking, however, rulers are not “makers” of the state, for they engage in rule only within an existing state whose governance they perpetuate, but do not institute. Aristotle ignores this point in noting that an artifact would be natural if it contained the art by which it is produced. Aristotle, *Physics*, Book 2, chapter 8, 199a12–14, 199b27–29, *The Complete Works of Aristotle*, vol. 1, 340, 341; also cited by Foster, *The Political Philosophies of Plato and Hegel*, 31.

43. See Foster, *The Political Philosophies of Plato and Hegel*, 1–71. As Foster observes, although Plato, in moving from the City of Pigs to political association, acknowledges the self-informing activity of rule in both the polis and the soul, he can only conceive that activity as another form, the threefold form of rulers, warriors, and producers in the polis and of rational, spirited, and appetitive parts in the soul. In both cases the ruling agency becomes once more a craftsman. The same exclusion of reflexive operation persists when rule is construed in terms of education. See Foster, *The Political Philosophies of Plato and Hegel*, 40–41, 45–46, 52.

44. See Plato, *Republic*, Book 4, 430e–431a, *Complete Works*, 1062.

45. Aristotle, *De Anima*, 430a17–19 in *The Complete Works of Aristotle*, vol. 1, 684.

46. Aristotle, *Politics*, Book 1, chapter 1, 1252a16, in *The Complete Works of Aristotle*, vol. 2, 1986.

47. Foster, *The Political Philosophies of Plato and Hegel*, 16–17.

48. Foster points out the connection with Kant’s conception of moral action in Foster, *The Political Philosophies of Plato and Hegel*, 16.

49. Foster, *The Political Philosophies of Plato and Hegel*, 58–59, 65. In so characterizing organic unity, Foster tends to assimilate it to an artifact, whose particularity is indifferent to the form it embodies as one exemplar of a preconceived design that can inform other embodiments. An organism, however, has a concretely universal unity that pervades its organs in their particularity. As Foster himself elsewhere acknowledges, the “form” of an organism is not passive and abstract like that of an artifact, but active and concrete. See Foster, “Christian Theology and Modern Science of Nature—Part 1: Paganism and Rationalism in Greek Philosophy,” 458.

50. As Foster suggests, Descartes makes this conclusion explicit insofar as he conceives mind to be a *thinking* thing. Foster, *The Political Philosophies of Plato and Hegel*, 59. Yet, Descartes construes this thinking thing still as an independent immaterial substance, failing to comprehend how it has actual life.

51. Foster, *The Political Philosophies of Plato and Hegel*, 74.

52. Ibid., 75.

53. Hegel, *Philosophy of Mind*, addition to §389, 33. In the *Philosophy of Right*, Hegel further characterizes the relation of soul and body in terms of the Idea, where the body figures as objectivity and the soul figures as the concept, with the embodied soul exhibiting the truth of the Idea, whereas a dead body is “untrue.” As we shall see, this further characterization underlies the self-determining cultivation endemic to mind. See G. W. F. Hegel, *Elements of the Philosophy of Right*, trans. H. B. Nisbet (Cambridge: Cambridge University Press, 1991), addition to §21, 53.

54. The logic of essence is the logic of determined determinacy, where some determiner determines something other than itself. Categories such as essence and appearance, grounded and grounded, whole and part, thing and its properties, and cause and effect fall within its two-tiered domain. Hegel gives the most systematic account of these categories in Book 2: The Doctrine of Essence in his *Science of Logic*. See G. W. F. Hegel, *Science of Logic*, trans. A. V. Miller (New York: Humanities Press, 1976), 389–571.

55. This is apparent in how, as Macmurray observes, “I am agent in my movement and not merely the cause of it. A cause may initiate a process; thereafter the process continues without control by its cause. But an agent is in his movement, and consequently can always alter or modify it at will within the limits of his resources.” Macmurray, *The Self as Agent*, 165–66). By the same token, the self-determination of mind is not simply teleological, as manifest in how “the intention . . . is not the same thing as the end. It is in the action, and is not fully determinate” (ibid., 173n1). This is why “the analysis of actions into means and end is reflective and presupposes that the action is both complete and successful” (ibid.).

56. John R. Searle, *Intentionality: An Essay in the Philosophy of Mind* (Cambridge: Cambridge University Press, 1983), ix.

57. See John R. Searle, *Mind, Language, and Society: Philosophy in the Real World* (New York: Basic Books, 1998), 50–52.

58. Even parts of plants that can be detached and remain alive, can only do so either by being grafted onto another plant with whom they integrate themselves as an added organ, or by developing into an entire plant, supplementing its original identity with the other organs needed for survival.

59. As Evan Thompson writes, “Each of us is precisely not a brain in a vat but rather a bodily subject. . . . The brain is an organ, not an organism, and it is the organism, animal, or person that has conscious access to the world.” See Thompson, *Mind in Life*, 242.

60. Antonio Damasio makes these points in *Descartes' Error: Emotion, Reason, and the Human Brain* (New York: Penguin, 2005), 228.

61. This is why Hume insists that one cannot derive any causal (e.g., efficient) relation from the concepts of objects. To do so would require formal causality, and more specifically, the derivation of necessary differentia from the genus, which ancient metaphysics privileges.

62. This is evident in Searle's acceptance of the “causal efficacy of consciousness” in repudiating the epiphenomenalist reduction of mind. That causal efficacy presumes that consciousness acts upon the body, instead of upon its own embodied self. See Searle, *Mind, Language, and Society*, 58. See also Searle, *Intentionality*, 265.

63. Searle, *Mind, Language, and Society*, 53.

64. In this connection, Foster speaks of the state and, by extension, the soul falling into the realm of spirit, beyond natural law and causal determination, insofar as its particular realization comprises part of its essence. In addition to involving existence, its essence is inherently individual and not merely specific (e.g., species specific) insofar as it contains within itself the power to determine its own constitution. See Foster, *The Political Philosophies of Plato and Hegel*, 26. Characterized by having the power to inform itself, the soul and the polis no longer have an essence specifiable as form, but only as spirit, whose perfection is not the justice of embodied harmony, but freedom. See Foster, *The Political Philosophies of Plato and Hegel*, 40.

65. Although Hegel provides detailed analyses of the fundamental difference between plants and animals in his *Philosophy of Nature*, he contradicts this differentiation in his logical treatment of life, which includes sensibility and irritability as features of life *per se*, rather than as differentia of the particular life form of animal organisms. See Hegel, *Logic*, addition to para. 216, p. 280, and addition to para. 218, p. 281.

66. Living organisms may be infertile owing to disease, accident, or heredity, but all have some relation to reproduction, by being either offspring or an original life form (arising from contingent coalescence of mechanical and chemical processes) from which others propagate.

67. As Dennett too imprecisely observes, plants can “even (in some species) *temporarily*” adjust “the chemical composition of their edible parts to ward off the *sensed onslaught* of transient herbivores.” See Daniel C. Dennett, *Kinds of Minds: Toward an Understanding of Consciousness* (New York: Basic Books, 1996), 64. As we shall see, this does not involve sensation or irritability, but rather sensitivity and tropism.

68. Hegel properly emphasizes this overriding character of plant life, arguing that the plant is subjective animation in its primary immediacy, where the objective working of the organism and its subjectivity are still immediately identical. The plant sustains itself in direct connection with its environment, doing so simply through the dispersed workings of its various components, none of which functions as a distinctly controlling agency. See Hegel, *Philosophy of Nature*, para. 343, 45.

69. Kant, *Critique of Judgment*, 250, AK 371.

70. Hegel, *Philosophy of Nature*, remark to para. 343, 46.

71. Hegel emphasizes this lack of inner qualitative differentiation so as to argue, somewhat one-sidedly, that plants are not organized into viscera. See Hegel, *Philosophy of Nature*, remark to para. 343, 47.

72. *Ibid.*, para. 346, 66.

73. *Ibid.*, para. 344, 47. As Hegel observes, air and water continually act upon the plant, which does not sip water. This reflects, he argues, the lack of selfhood, the inwardness that is free of external relatedness. See Hegel, *Philosophy of Nature*, addition to para. 344, 51.

74. Admittedly, animals retain some vegetative metabolic functions, such as the continuous intake of air facilitated through the autonomous nervous system and the absorption of sunshine to help manufacture certain vitamins and regulate certain physiological rhythms.

75. Jonas, *The Phenomenon of Life*, 103.

76. Ibid., 102, 104. As Jonas observes on p. 102, “the continuous availability of the matter needed for the renewal of form gives no occasion for the concern in such renewal to turn into appetite.”

77. As Hegel observes, plants, unlike animals, cannot check their drives, lacking the theoretical nature of sentience, which places them in a subjective relation to their environment. See Hegel, *Philosophy of Nature*, addition to para. 365, 167.

78. Hegel observes that because the plant exhibits no self-subsistent subjectivity distinct from its particular internal differentiation, it cannot freely determine its place. See Hegel, *Philosophy of Nature*, para. 344, 47.

79. Dennett, *Kinds of Minds*, 66–67.

80. As Hegel puts it, the reason for plants’ intussusception being continuous is that plants lack true subjectivity—their individuality is perpetually falling apart into its particularity, unable to hold on to itself as related to itself while excluding externality. See Hegel, *Philosophy of Nature*, addition to para. 344, 50.

81. Jonas identifies three distinguishing features of animal life: “motility, perception, emotion.” See Jonas, *The Phenomenon of Life*, 99. These three, however, amount to little more than sensibility and irritability. Whereas perception is equivalent to sensibility, motility and emotion together comprise irritability insofar as irritability involves responding to sensations in function of the inward drives of the animal. Jonas’s “emotion” cannot be equivalent to the practical feeling of practical intelligence, which comprises a felt registration by an individual of to what degree its aims are fulfilled in the world. All animals have drives, but not all have practical intelligence and awareness of their own purposes and how far the world fulfills them.

82. Hegel emphasizes this, arguing that in the animal, organic individuality exists as subjectivity. See Hegel, *Philosophy of Nature*, addition to para. 350, 102.

83. Both Hegel and Jonas first introduce irritability as if it applied to life per se. See Jonas, *The Phenomenon of Life*, 84–85; and Hegel, *Science of Logic*, 768. To do so, they must characterize irritability in terms of the minimal responsiveness to stimuli that plants, as well as animals, possess. This allows Hegel to include irritability as one of the constitutive features of the logical concept of life, which he develops in his *Science of Logic*. Nonetheless, Hegel introduces sentience and irritability as distinctive features of animal life in his *Philosophy of Nature*. See Hegel, *Philosophy of Nature*, para. 359–62, 384–91. He can do this because there irritability involves not just the immediate localized responsiveness of tropism, but the centralized self-activity involving sentience, urge and self-motion.

84. This limitation enables the nervous system to mold itself so as to retain registration and response patterns. If instead nerve cells were continually reproducing, the architecture of nerve pathways would continually be disrupted by new growth.

85. As Hegel points out, the animal need not know its drive as a purpose and be aware of its ends as ends. The drive can simply appear as unconscious instinct, fulfilling itself in specific activities that serve the animal’s individual or species survival. Instinct appears paradoxical only if teleology is identified with technique and purposes are assumed to be external and thought to exist only consciously. Hegel observes that Aristotle calls what is activated unconsciously in accord with purpose φύσις. See Hegel, *Philosophy of Nature*, para. 360, 145, remark to para. 360, 145, and addition to para. 360, 146, addi-

tion to para. 361, 146. Popper seems to ignore the unconscious character of instinct in suggesting that an amoeba's free-moving active exploration of its environment implies that it is conscious. Irritability certainly involves such active exploration, but this need not involve the subject-object differentiation of conscious awareness. See Karl Popper and John C. Eccles, *The Self and Its Brain: An Argument for Interactionism* (London: Routledge, 1998), 30.

86. Dennett, *Kinds of Minds*, 67. As Dennett observes, the "ancient hormonal systems . . . operate independently of . . . sentient accompaniments," so that sleeping or comatose animals may retain sensitivity while sentience is quiescent or absent. Dennett, *Kinds of Minds*, 67.

87. Ramachandran describes how this occurs in the homo sapien nervous system as follows: "Every time a 'command' is sent from the supplementary motor area to the motor cortex, it goes to the muscles and they move. At the same time, identical copies of the command signal are sent to two other major 'processing' areas—the cerebellum and the parietal lobes—informing them of the intended action. Once these command signals are sent to the muscles, a feedback loop is set in motion. Having received a command to move, the muscles execute the movement. In turn, signals from the muscle spindles and joints are sent back up to the brain, via the spinal cord, informing the cerebellum and parietal lobes that 'yes, the command is being performed correctly.' These two structures help you compare your intention with your actual performance . . . modifying the motor commands as needed." See V. S. Ramandran and Sandra Blakeslee, *Phantoms in the Brain* (New York: Harper Perennial, 1998), 44–45.

88. As Hegel puts it, plant sensitivity is merely a "mechanical elasticity," a stimulation by external and purely local agents that can take place without any faculty of sense. See Hegel, *Philosophy of Nature*, addition to para. 344, 52.

89. *Ibid.*, para. 354, 111.

90. As Hegel suggests, sentience is the return of the living being into itself, where bodily modifications become conveyed to a central registration, enabling the animal to become both objective to itself and the subject that senses this self-objectification. See Hegel, *Philosophy of Nature*, addition to para. 344, 48.

91. This does not mean that sentience or consciousness is merely a second order scanning, where some part of the brain scans brain activity in general, as D. M. Armstrong suggests in his book, *A Materialist Theory of the Mind* (London: Routledge and Kegan Paul, 1968). As Popper observes, this view does not explain why such second order scanning should produce sentient awareness or consciousness. Popper and Eccles, *The Self and Its Brain*, 93. What allows the electro-chemical transmissions of that "second order scanning" to comprise not just their own neurological firings but a relation between themselves and the brain activity they "scan"? To have the needed reflexivity, the "self" of sentience and irritability cannot be a part of the brain, nor the brain in its entirety, nor any physiological part of the animal. It must instead possess an omnipresence constituted by the corporeal functioning it pervades, a functioning that includes a neurological unification.

92. Because sentience is an integrated function belonging to the animal organism, thereby contributing to the self-sustaining and reproductive conatus of life, animals sense, as Popper puts it, what their biological interests and "action programs" make relevant,

such that “there is no sense organ in which anticipatory theories are not genetically incorporated.” So, for example, a frog cannot see a nearby insect until it moves. Popper and Eccles, *The Self and Its Brain*, 134–35.

93. Lower animals lacking a nervous system may still have sentience and irritability thanks to more rudimentary linkages of electro-chemical or even chemical transmitters. See *ibid.*, 143.

94. Hegel observes that animals retain a vegetable nature insofar as they relate to light, air, and water, independently of irritability. See Hegel, *Philosophy of Nature*, addition to para. 351, 107.

95. *Ibid.*, addition to para. 351, 107.

96. Helmuth Plessner characterizes this distinction between plant and animal metabolism in terms of “open” and “closed” forms of organization. As Plessner writes, “Geschlossen ist diejenige Form, welche den Organismus in allen seinen Lebensäusserungen mittelbar seiner Umgebung eingliedert und ihm zum selbstständigen Abschnitt des ihm entsprechenden Lebenskreises macht. Wenn uns zur offenen Form gehört, den Organismus mit allen seinen an die Umgebung angrenzenden Flächen Funktionsträger sein zu lassen, so wird die geschlossene Form sich in einer möglichst starken Abkammerung des Lebewesens gegen seine Umgebung äussern müssen. Diese Abkammerung hat dabei den Sinn der mittelbaren Eingliederung in das Medium. Auf Grund des vermittelten Kontaktes bleibt dem Organismus nicht nur eine grössere Geschlossenheit als den pflanzlichen Lebewesen gewahrt, sondern er erhält echte Selbstständigkeit, d. h. Gestelltheit auf ihm selber, die zugleich eine neue Existenzbasis bedeutet.” See Helmuth Plessner, *Die Stufen des Organischen und der Mensch: Einleitung in die philosophische Anthropologie* (Berlin: Walter de Gruyter, 1975), 226.

97. Jonas, 103.

98. *Ibid.*, 102.

99. As Jonas explains, “the indirectness of animal existence holds in its wakefulness the twin possibilities of enjoyment and suffering, both wedded to effort. . . . The suffering intrinsic in animal existence is thus primarily not that of pain (which is occasional and a concomitant) but that of want and fear, i.e., an aspect of appetitive nature as such.” Jonas, *The Phenomenon of Life*, 105.

100. *Ibid.*

101. Hegel, *Philosophy of Nature*, addition to para. 344, 51.

102. Jonas, *The Phenomenon of Life*, 105.

103. Hegel lists this shape maintenance among the characteristic self-activities of animals. See Hegel, *Philosophy of Nature*, para. 351, 103.

104. Hegel describes “animal heat” as serving this distinctive function. See Hegel, *Philosophy of Nature*, addition to para. 344, 51; and addition to para. 351, 106.

105. Jonas, *The Phenomenon of Life*, 105.

106. As Foster points out, Aristotle mistakenly extends this feature of animal movement to all nature, determining the motion proper to natural objects by their kind, such that movement can be predicted based on knowledge of their specific natures. See Foster, “Christian Theology and Modern Science of Nature—Part 1: Paganism and Rationalism in Greek Philosophy,” 450.

107. Foster discusses all these points in Foster, "Christian Theology and Modern Science of Nature—Part 1: Paganism and Rationalism in Greek Philosophy," 447–48.

108. Hegel, *Philosophy of Nature*, addition to para. 344, 49–50. To paraphrase Hegel, the self as self excludes externality, for in self-relatedness, the self comprises both sides of the relationship, forming an internal circuit of the soul, keeping itself aloof from inorganic nature. Plants have not attained this selfhood, for they lack any inwardness that is free of external relatedness. See *ibid.*, 50–51.

109. Popper and Eccles, *The Self and Its Brain*, 136–37.

110. *Ibid.*, 137.

111. *Ibid.*

112. As Jonas puts it, "The cybernetical model reduces animal nature to the two terms of sentience and motility, while in fact it is constituted by the triad of perception, motility, and emotion." See Jonas, *The Phenomenon of Life*, 126.

113. *Ibid.*

114. Admittedly, an animal could be totally paralyzed and retain sentience, but its survival would depend upon some other agency to do for it what its immobilized irritability would normally contribute.

115. Hegel, *Philosophy of Nature*, addition to para. 350, 103.

116. Popper suggests that if brain transplants were ever possible, this would disprove Strawson's theory that persons are logically primitive, since the person unites the physical properties of the whole human body with its mental personal properties. With the self being transplantable along with the brain, the person would, Popper claims, be only *psychologically* primitive, since personal identity would no longer rest on a person's entire body, but only on the continuity of its brain. See Popper and Eccles, *The Self and Its Brain*, 117–18. That principal mental features of the self cannot be detached from its same old brain does not remove the "primitive" character of the unity of mind and body. That unity remains no matter what levels of endowment apply to the mind and body in question. A mind limited to the preconscious psyche still requires embodiment just as much as does a prelinguistic consciousness or a discursively rational intelligence. Moreover, since mind develops itself, becoming what it is in virtue of how it cultivates and relates to itself, the identity of a mind undergoes transformations without losing its self-informed identity. In this respect, a self emerging from the brain transplant will encompass psychological features reflecting the specific neurological and sensory features of other parts of its new body and how its brain becomes integrated within the whole organism to which it now belongs. Popper acknowledges this by recognizing "that the brain is owned by the self, rather than the other way round" (*ibid.*, 120).

117. Popper likens this relation to that between an active programmer and a computer, but this analogy cannot capture how mind and brain belong to the same animal organism and how the mind pervades the entire animal as the subject of sentience and irritability (*ibid.*). Programming is always antecedent to the operation of computer hardware and the programmer need have no further relation to the computing that ensues.

118. Hegel, *Philosophy of Nature*, addition to para. 354, 116.

119. Harris, *The Foundations of Metaphysics in Science*, 385.

120. *Ibid.*, 383.

121. Although Damasio recognizes that “those neural representations must be correlated with those which, moment by moment, constitute the neural basis for the self,” he cannot explain how a *subject* both performs and relates to this correlation. Nonetheless, he does acknowledge that “mind derives from the entire organism as an ensemble.” See Damasio, *Descartes’ Error*, 90–91, 99, 225.

122. Hegel, *Philosophy of Nature*, addition to para. 351, 104.

123. *Ibid.*, para. 353, 109.

124. *Ibid.*, addition to para. 353, 110.

125. *Ibid.*, para. 357, 137.

126. Whereas plants relate to their environment either indifferently or in a directly practical manner, assimilating nutrients and absorbing light, animals can relate theoretically to other things by means of sensation, just as they can move themselves to satisfy their appetites on the basis of that theoretical relation. See Hegel, *Philosophy of Nature*, addition to para. 351, 104.

127. In this way irritability is stimulation by an other and the reaction of self-preservation in face of this stimulation, wherein nerves and muscles accomplish a “simple conversion of receptivity into reaction.” See Hegel, *Philosophy of Nature*, para. 354, 112.

128. Admittedly, as Popper points out, there are animals that deviate in different degrees from the “principle of individuation” of subjectivity: sponges with no nervous system, sea urchins that lack a fully centralized nervous system, primitive worms that can be cut into separate individuals, and animal colonies (e.g., the Portuguese Man-of-War) whose individual members perform specialized functions like organs of one encompassing living thing. See Popper and Eccles, *The Self and Its Brain*, 113.

129. This raises theological difficulties for any religious view that regards the divine as spirit. If spirit is mind and mind must have an animal embodiment, spirit is necessarily encumbered by the finitude of animal existence. The Trinitarian doctrine may attempt to retain the infinitude of a Holy Spirit by uniting God with an actual human being, but if that union depends upon a disembodied spirit rising from the dead, that spirit will lose all specifically mental character.

Notes to Chapter 4

1. Jonas questions this claim, arguing that the sense of touch, which Aristotle considers necessary for all sentience, only provides determinate sensibility through a succession of touch sensations involving movement and force, which the sentient subject must connect through short-term memory. Hans Jonas, *The Phenomenon of Life: Toward a Philosophical Biology* (Evanston, IL: Northwestern University Press, 2001), 140. If then there can be no sentience without short-term memory, there can be no mind without feeling and at least such short-term memory, together with the imagination this depends upon.

2. Aristotle, *Metaphysics*, Book Alpha, chapter 1, 980a29–981b9, in *The Complete Works of Aristotle*, vol. 2, 1552–53.

3. Popper points to these distinctions between animal “language” and human language, characterizing animal language as being limited to expressive (symptomatic) and

signaling functions, whereas human language additionally has descriptive and argumentative functions. See Karl R. Popper, *The Open Universe: An Argument for Indeterminism*, from the *Postscript to the Logic of Scientific Discovery* (Totowa, NJ: Rowman & Littlefield, 1982), 122–23, 153–54.

4. Konrad Lorenz points out this parallel inheritability of behavioral and physiological patterns in his introduction to Charles Darwin's *The Expression of the Emotions in Man and Animals* (Chicago: The University of Chicago Press, 1965), xii. As Popper points out, even learned adaptations are genetically based since heredity gives organisms "the aptitude of acquiring new adaptations." See Karl Popper and John C. Eccles, *The Self and Its Brain: An Argument for Interactionism* (London: Routledge, 1998), 121.

5. G. W. F. Hegel, *Philosophy of Nature*, vol. 3, ed. and trans. M. J. Petry (London: George Allen and Unwin, 1970), addition to para. 361, 147.

6. Popper ignores this rudimentary sentience and irritability in describing the baby as having a body before the mind, which he alleges is a later achievement. Popper and Eccles, *The Self and Its Brain*, 115. Consciousness, self-consciousness, and intelligence may indeed be later achievements of the mind's development, but the feeling psyche must be there from the outset.

7. Jonas suggests that animals' development of their powers to move about and perceive at a distance paves the way for consciousness of space, whereas "the initial situation of irritability and irritant confines the experience of the inside-outside differential to that of mere contiguity which allows the outward no true dimension but lets it diffusely coincide with the sensitive surface of the organism itself." Jonas, *The Phenomenon of Life*, 100.

8. Damasio writes, "The mind had to be first about the body, or it could not have been. On the basis of the ground reference that the body continuously provides, the mind can then be about many other things, real and imaginary." See Antonio Damasio, *Descartes' Error: Emotion, Reason, and the Human Brain* (New York: Penguin, 2005), xx. Damasio's claim involves a latent dualism, for it suggests that the mind refers to a body distinct from itself, rather than relating to its own embodied self. This dualism is carried over in Damasio's reference to the body as something distinct from the brain, and to the brain as something that acts upon the body, as if the brain were not immersed in the reciprocal functionality of organic unity. So Damasio refers to brain-body interaction and mind-body interaction. See Damasio, *Descartes' Error*, 86, 88, 119.

9. Errol Harris points out these distinguishing features of preconscious feeling and consciousness of objects. See Errol Harris, *The Foundations of Metaphysics in Science* (Atlantic Highlands, NJ: Humanities Press, 1993), 367.

10. Locke provides an early proponent of this dogma, using it to argue against innate ideas, claiming that no content can be mental if mind is not conscious of it (section 5, chapter 1, Book 1 of *An Essay Concerning Human Understanding*, ed. Alexander Campbell Fraser (New York: Dover, 1959). Yet, as Leibniz points out in his *New Essays on Human Understanding*, Locke contradicts his own claim for the exclusive mental reality of consciousness by acknowledging memory, which involves mental contents that have to be brought to consciousness to be recalled. See G. W. Leibniz, *New Essays on Human Understanding*, trans. and ed. Peter Remnant and Jonathan Bennett (Cambridge: Cambridge University Press, 1996), 52, 54.

11. An example of a neurological basis of unconscious awareness is provided by the human brain stem structure, the superior colliculus, which, as Ramachandran explains, concerns “grasping, navigation, and other spatial functions” (V. S. Ramachandran, *A Brief Tour of Consciousness*, [New York: Pi Press, 2004], 27) that can operate without consciousness, as graphically shown in the condition of blindsight, where victims of damage to the visual cortex involved in conscious vision can still accurately reach for objects they cannot consciously see (*ibid.*, 28 ff.). As Ramachandran notes, “we all suffer from blindsight” (*ibid.*, 31), as when conversing while driving a car without paying any conscious attention to how one maneuvers. Significantly, one cannot drive while unconsciously conversing, suggesting, not surprisingly, that linguistic interaction cannot proceed without consciousness (*ibid.*, 32).

12. Searle writes, “the attribution of a mental state to an agent is either an attribution of a conscious state or an attribution of a state that is the sort of thing that could be conscious . . . an unconscious state is *mental* only in virtue of its capacity in principle to produce a conscious mental state.” See John R. Searle, *Mind, Language, and Society: Philosophy in the Real World* (New York: Basic Books, 1998), 76. Searle qualifies this potentiality, admitting that unconscious states may be inaccessible to consciousness due to “brain damage, repression, or other causes” (*ibid.*, 76).

13. Searle, *Mind, Language, and Society*, 40, 65. In this vein, Searle writes, “*The notion of an unconscious mental state implies accessibility to consciousness*. We have no notion of the unconscious except as that which is potentially conscious.” See John R. Searle, *The Rediscovery of the Mind* (Cambridge, MA: The MIT Press, 1994), 152.

14. See Searle, *The Rediscovery of the Mind*, chapter 7, 151–73.

15. John R. Searle, *Intentionality: An Essay in the Philosophy of Mind* (Cambridge: Cambridge University Press, 1983), 1.

16. *Ibid.*, 2.

17. *Ibid.*

18. Searle, *Mind, Language, and Society*, 95.

19. Louis Dupré points this out, citing Berkeley’s “paradoxical conclusion that thinking is never interrupted: ‘The soul always thinks.’” See Louis Dupré, *The Enlightenment and the Intellectual Foundations of Modern Culture* (New Haven, CT: Yale University Press, 2004), 49.

20. Popper and Eccles, *The Self and Its Brain*, 125, 129, 130, 131. As Popper points out, these unconscious dispositions to recall are not merely dispositions to behave, as behaviorists would maintain, but “dispositions to relive an experience” (*ibid.*, 131).

21. Searle, *Mind, Language, and Society*, 97–98.

22. Searle, *Intentionality*, 4.

23. As Popper also notes, Descartes makes the converse mistake of presuming that consciousness could be aware of the argument, “I think, therefore I am,” in skeptical isolation from other things and other persons, instead of recognizing that such thinking presupposes language and the interaction with others that makes any use of a pronoun possible. See Popper and Eccles, *The Self and Its Brain*, 49–50.

24. Popper identifies three great emergences that must be acknowledged even if we cannot explain them: the emergence of life, of animal consciousness, and of human rational intelligence. Popper, *The Open Universe*, 122. Although the conception of the

exhaustive actuality of mind presupposes the emergence of life, it will shed light on how animal prediscursive consciousness emerges from the minimal threshold of the psyche and on how rational intelligence emerges on the basis of that prerational consciousness.

25. For a further discussion of the questionability of the “zombie” counterexample, see Evan Thompson, *Mind in Life: Biology, Phenomenology, and the Sciences of Mind* (Cambridge, MA: Harvard University Press, 2007), 230–34.

26. Searle reverts to this reduction by characterizing the “higher level” of mind as something imparted by an external function, which artificial “brains” could fulfill.

27. Hegel logically captures this self-transformative character by describing mind in terms of the Idea, whose process unites concept and objectivity in and through themselves, bringing into being the inherent correspondence in which truth resides. This characterization allows Hegel to speak of the embodied mind as coming to exhibit the truth of the Idea, where body and mind unite objectivity and subjectivity, leaving the dead body something “untrue,” lacking that unifying process. See G. W. F. Hegel, *Elements of the Philosophy of Right*, trans. H. B. Nisbet (Cambridge, Cambridge University Press, 1991), addition to §21, 53.

28. For a critical discussion of the behaviorist view of cognitive development, see Charles Taylor, *Human Agency and Language: Philosophical Papers 1* (Cambridge: Cambridge University Press, 1985), 139–40.

29. *Ibid.*, 140.

30. As Taylor observes, behaviorism tends to be “fiercely environmentalistic,” underplaying these differing innate endowments, even though associative learning must depend upon some unlearned activity to get reflex reaction acquisition underway. See Taylor, *Human Agency and Language*, 141.

31. See Taylor, *Human Agency and Language*, 141 and 144, for a brief discussion of Chomsky in connection with genetic psychology.

32. See Taylor, *Human Agency and Language*, 142.

33. Hegel terms this the “anthropological” dimension of mind, which appropriately applies to the situation of the human mind. The philosophy of mind, however, conceives mind in its totality, and that totality is realized in all possible animal forms, of which our terrestrial natural history provides only a partial realization. Although the complete account of mind is fully exhibited only in intelligent life, that need not be restricted to homo sapiens. Hence, the natural givenness of mind is not just anthropological, but more broadly zoological. See G. W. F. Hegel, *Philosophy of Mind* being *Part Three of the Encyclopaedia of the Philosophical Sciences 1830*, trans. William Wallace together with the *Zusätze in Boumann’s Text 1845*, trans. A. V. Miller (Oxford: Oxford University Press, 1977), §387, 25; *Zusatz* to §387, 27; §391, 35–36.

34. Mind’s being encumbered with “natural,” given determinacy is logically prefigured by how, as Hegel shows in his *Logic*, the self-determined determinacy of the concept arises from something else, namely the reciprocity into which the logic of essence reverts. Although the concept emerges logically when the difference between determiner and determined is overcome, the self-determined determinacy that results has not given itself its own character. Rather, it arises from that antecedent process, leaving the concept with an initial form of self-determination that has not yet fully determined itself. Consequently, the concept must come to mediate its own determination, which it can only do through

further development that progressively renders every determination of the concept something determined by conceptual factors. This occurs first in judgment, where the factors of the concept (universality, particularity, and individuality) are *immediately* determined by one another through the copula “is” (e.g., the particular or individual *is* the universal). The syllogism then overcomes judgment’s immediate determination by providing a mediating term, enabling the determination of one concept term by another to be mediated by a third (e.g., the individual is the universal by virtue of its particularity). Objectivity removes the abiding difference between the mediating term and the two terms it connects, allowing individuals to be so completely self-mediated that their external relations are completely indifferent to their individuality. See G. W. F. Hegel, *Science of Logic*, trans. A. V. Miller (New York: Humanities Press, 1976), 600–704.

35. Hegel, *Philosophy of Mind*, §401, 75–77.

Notes to Chapter 5

1. Evan Thompson characterizes this minimal mentality as “background consciousness,” although it lacks the defining subject-object opposition of consciousness. So Thompson writes, “Background consciousness in this fundamental sense is none other than sentience, the feeling of being alive, the affective backdrop of every conscious state.” Evan Thompson, *Mind in Life: Biology, Phenomenology, and the Sciences of Mind* (Cambridge, MA: Harvard University Press, 2007), 354.

2. Hegel describes this as an “anthropological” treatment, on the assumption that the human species is that which realizes mind in its entirety and therefore has a privileged claim upon the natural givenness of mental life. Since, however, mind must have an animal, but not necessarily a human embodiment, the account of mind’s natural dimension is more properly “zoological” than “anthropological.” See G. W. F. Hegel, *Philosophy of Mind*, being *Part Three of the Encyclopaedia of the Philosophical Sciences 1830*, trans. William Wallace together with the *Zusätze in Boumann’s Text 1845*, trans. A. V. Miller (Oxford: Oxford University Press, 1977), §387, 25; Zusatz to §387, 26.

3. When Hegel identifies the psyche in general as a “world soul,” he is addressing the compendium of these universal natural features of the psyche, which, as he points out, is not an independent single spirit standing above individuals minds, but something existing only in individuals, as the minimal ideality of mind that finds itself possessed of natural qualities. See Hegel, *Philosophy of Mind*, §391, 35–36. This minimal ideality consists simply in the supervenience upon animal nature of something irreducible to it that has yet to determine itself further.

4. Aristotle, for example, observes that humans have time to think and contemplate because they have a long intestine, giving them a respite from constantly searching for food. Chad Weiner discusses this point in his *Final Cause as the Unity of Sensible Ousia: The Compatibility of Aristotle’s Metaphysical and Physical Definition of a Living Being* (PhD diss., University of Georgia 2008), 288.

5. As Errol Harris emphasizes, stimuli-response relations are not isolated mechanisms, but integrated elements in the life process of the whole organism, whose self-sustaining

metabolism mediates each sensation and behavior. See Errol E. Harris, *The Foundations of Metaphysics in Science* (Atlantic Highlands, NJ: Humanities Press, 1993), 318–23, 326, 345.

6. Karl Popper and John C. Eccles, *The Self and Its Brain: An Argument for Interactionism* (London: Routledge, 1998), 125.

7. Sexual instincts play a prominent role, for as J. Melvin Woody observes, “Animals that cannot perceive the connection between copulation and reproduction would soon disappear if instinctive sexuality did not ensure the perpetuation of the species.” J. Melvin Woody, *Freedom’s Embrace* (University Park: The Pennsylvania State University Press, 1998), 262. Yet, as Woody notes, instincts are not mechanical, but allow for a range of choice, for “if the instinct left the individual organism no choice at all, then the species could not adapt to any variation whatsoever in its circumstances and would perish with the first minor change in the environment” (*ibid.*, 262).

8. These considerations lend support to Konrad Lorenz’s and Charles Darwin’s shared claim that the unity of species being can be exhibited just as much in inherited behavior as in inherited physiological structure. See Charles Darwin, *The Expression of the Emotions in Man and Animals* (Chicago: The University of Chicago Press, 1965), xii, 29, 40, 42, 48, 352.

9. Hegel’s threefold differentiation of minds in terms of general differences of race, further particularization into national minds and final individuation into individual minds is doubly specious. Hegel, *Philosophy of Mind*, Zusatz to §395, 51. If racial differences cannot be correlated with types of mind, the intraracial divisions by nation can hardly be expected to entail any influence upon mental capabilities, unless the conventions of a conventionally distinct nation have physiological ramifications. Such could conceivably be the case, as the example of the Romans might suggest, if their lead plumbing were to have produced a distinctive mental impairment at a universally early age.

10. For this reason, Hegel may be wrong to distinguish types of minds in respect to geographical, racial, ethnic, and gender differences (see Hegel, *Philosophy of Mind*, §393, 40; Zusatz to §399, 35), but he is right to acknowledge how kinds of mental life are conditioned by some natural differences, even if not all such differences are relevant to particularizing mind. Hegel himself acknowledges this when he observes that descent affords no ground for granting or denying freedom and dominion to humans. Hegel, *Philosophy of Mind*, Zusatz to §393, 41. Although differences of race, ethnicity, and gender leave mental capacities undetermined, deeper diversities of species being can correlate with different types of mind, as shown by the natural divides separating humans from great apes, primates from nonprimate mammals, and mammals from “lower” vertebrates.

11. As Joel Whitebook observes, “To deny the strength of inborn dispositions is to engage in wishful thinking. Any nurse with extensive experience in neonatal care can tell you that babies have markedly different personalities from the moment they are born.” Joel Whitebook, “First Nature and Second Nature in Hegel and Psychoanalysis,” *Constellations* 15, no. 3 (2008): 386.

12. As Hegel observes, a concrete description of the stages in mental development requires anticipating the complete capabilities of the matured mind. See Hegel, *Philosophy of Mind*, §396, 55.

13. Insofar as the phases of animal life are tied to species reproduction, the natural stages of mind can be analogously differentiated in terms of successive relations of the individual to the genus. As Hegel explains, childhood presents the natural unity of the individual with its genus and encompassing world, to be superseded by an independent maturity where the individual can do what is not merely natural, and finally by an old age where the individual loses independence and returns to unity with the universal nature of its species being. See Hegel, *Philosophy of Mind*, Zusatz to §396, 57.

14. Hegel logically contrasts the natural ages, the sexual relationship, and the awakening of the psyche as relations where, respectively, the persisting psyche undergoes transient alterations which are not in a relation of opposition, the individual psyche stands in a fixed opposition to another, and the psyche relates to itself through the mediation of opposition. See Hegel, *Philosophy of Mind*, Zusatz to §398, 67ff. What logically distinguishes the awakening psyche from the sexual relationship of the psyche is that in sleep and waking, the opposition of the psyche to its other becomes internalized within the psyche in the form of a persisting alternation of states of the self-same individual. For this reason, Hegel can claim that the logical relations of the stages in the maturation of the psyche and of sexual difference are combined in the alternation of sleep and awakening. See Hegel, *Philosophy of Mind*, Zusatz to §398, 67. This explains his account of the logical transition from the sexual relationship to sleep and waking. In the sexual relationship, each individual psyche realizes itself in uniting with its other. This unification is achieved in sleep and waking insofar as the opposing psyches become merged into opposing states of each psyche. Hegel here distinguishes sleep and waking in terms of the differences he draws between the two sexes. Namely, just as one sex is in immediate unity with its substance while the other opposes its own substance, so sleep is that phase of the psyche immersed in unity with its natural substance, whereas waking is that phase where the psyche comes into opposition with this unity. See Hegel, *Philosophy of Mind*, Zusatz to §398, 68. Given the possible varieties of sexual reproduction, Hegel's characterization of the two sexes is contingent, as well as empirically suspect. So long, however, as sexual reproduction involves an opposition of sexes, with attending attractive drives, the logical connection to sleep and waking can still be made, at least insofar as the sexual opposition drives to a merging that gets incorporated as phases of the same psyche.

15. Hegel suggests that this double transition unites the implicit substantiality of the psyche (exhibited in sleep) with its self-related individuality (exhibited in the waking state), containing them in a process where each resolves itself into its counterpart. This sets the stage, logically speaking, for their combination in a stable unity, which Hegel identifies as the process of sensibility, where the psyche relates to itself in the same determinations it has asleep. See Hegel, *Philosophy of Mind*, §399, 71.

16. Although Hegel avoids waking necessarily contain will and intelligence, he does suggest that the waking mind finds a world confronting it, as if waking and awakening to consciousness were identical. This goes against his otherwise strict treatment of waking and sleep as natural happenings to the psyche. See Hegel, *Philosophy of Mind*, Zusatz to §398, 90.

17. Hegel, *Philosophy of Mind*, Zusatz to §399, 35. See also Hegel, *Philosophy of Nature*, vol. 3, ed. and trans. M. J. Petry (London: George Allen and Unwin, 1970), Zusatz to §361, 146.

18. "It is impossible not to see in sleep a relaxing, even if only functional, of the tension of the nervous system, ever ready during waking hours, to prolong by an appropriate reaction the stimulation received . . . we must suppose, in deep sleep, at least a functional break in the relation established in the nervous system between stimulation and motor reaction." Henri Bergson, *Matter and Memory* (New York: Cosimo Classics, 2007), 200, 227–28.

19. Hegel describes this relation as one where the individuality of the psyche distinguishes its self-centralized being from its *mere* being. See Hegel, *Philosophy of Mind*, §398, 65.

20. Hegel employs this logical characterization. See Hegel, *Philosophy of Mind*, §398, 65.

21. For this reason, Macmurray is wrong in maintaining that the difference between dreaming and waking is "that between motive and cognitive consciousness," where "a dream is a highly discriminated form of consciousness which is not cognitive, but merely a reaction to a stimulus." John Macmurray, *The Self as Agent* (Amherst, NY: Humanity Books, 1991), 125.

22. Immanuel Kant, *Critique of Pure Reason*, trans. and ed. Paul Guyer and Allen W. Wood (Cambridge: Cambridge University Press, 1998), A202, B247, 312.

23. Hegel, *Philosophy of Mind*, Zusatz to §398, 68.

24. Hegel draws these connections in the *Philosophy of Mind*, Zusatz to §398, 68.

25. *Ibid.*, 69.

26. See Aristotle, *On Sleep*, chapter 2, 455a, *The Complete Works of Aristotle*, vol. 1, ed. by Jonathan Barnes (Princeton, NJ: Princeton University Press, 1984), 723. The connection between waking and consciousness is not fully at hand in Aristotle because the common sense is more limited in scope than consciousness and not detached from the unity of the psyche. The common sense only unites the different modes of sensation, leaving all other mental contents out of account, while retaining the bodily embeddedness of the psyche. By contrast, consciousness encompasses all mental contents and treats them as objective determinations from which it itself is disengaged. Richard Rorty discusses these contrasts in *Philosophy and the Mirror of Nature* (Princeton: Princeton University Press, 1979), 47–54.

27. Animals that are so limited could be those that lack the developed central nervous system and sense organs that would enable them to perceive with discrimination at a distance, leaving them always registering only the interior and surface of their own bodies (e.g., perhaps anemones, sea cucumbers, etc.).

28. At the rudimentary level of the psyche that feels, but is neither conscious nor intelligent, dreams could consist only of what would be merely felt if the psyche were awake. Hence, such "dreams" would be difficult to distinguish from the physiological stimuli-response movements that operate in sleep, without producing feeling.

29. Aristotle argues that animals, but not plants, are subject to waking and sleep because the animal, unlike the plant, generically possesses sensation, which is immobilized in sleep. See Aristotle, *On Sleep*, chapter 1, 454b, *The Complete Works of Aristotle*, vol. 1, 723.

30. Aristotle, *On Sleep*, chapter 2, 455b, *The Complete Works of Aristotle*, vol. 1, 724.

Notes to Chapter 6

1. In this sense, Hegel points out, the subject can feel its inner determinations only by making them corporeal, for only if they are posited both as distinct and as identical with the psyche, can they be felt. See G. W. F. Hegel, *Philosophy of Mind*, being *Part Three of the Encyclopaedia of the Philosophical Sciences 1830*, trans. William Wallace together with the *Zusätze in Boumann's Text 1845*, trans. A. V. Miller (Oxford: Oxford University Press, 1977), Zusatz to §401, 82.

2. Antonio Damasio ignores this, mistakenly treating feelings as if “they are first and foremost about the body,” offering “us *the cognition of our visceral and musculoskeletal state*.” Antonio Damasio, *Descartes' Error: Emotion, Reason, and the Human Brain* (New York: Penguin Books, 2005), 159. He therefore fails properly to distinguish feeling from sensation, which incorporates feeling and provides immediate consciousness of the being of objectivity, and from intuition, which incorporates both feeling and sensation and provides immediate awareness of what is both subjective and objective.

3. Errol Harris makes this point. See Errol Harris, *The Foundations of Metaphysics in Science* (Atlantic Highlands, NJ: Humanities Press, 1993), 367.

4. Hegel draws this important contrast in the Zusatz to §402, 89, of his *Philosophy of Mind*.

5. Hegel points out that the psyche, in being one and simple, possesses a universality different from that of mindless corporeal individuals, whose universality is always self-externalized. Hegel, *Philosophy of Mind*, §388, 29. This is exhibited by the organic processes of death and reproduction, where the universality of the genus exists by going beyond the immediate existence of the individual.

6. For this reason, Hegel can rightly compare the psyche to Aristotle's passive *nous*, which is potentially everything given in nature. See Hegel, *Philosophy of Mind*, §389, 29.

7. See Hegel, *Philosophy of Mind*, Zusatz to §402, 90.

8. See Hegel, *Philosophy of Mind*, Zusatz to §401, 84.

9. Hegel makes these points. See Hegel, *Philosophy of Mind*, Zusatz to §401, 83.

10. Ibid.

11. As Hegel observes, the distinction of external and internal sensations is only for our reflective consciousness, not for the psyche itself. See Hegel, *Philosophy of Mind*, Zusatz to §402, 90.

12. Antonio Damasio, *Descartes' Error: Emotion, Reason, and the Human Brain*, (New York: Penguin Books, 2005), 159.

13. Aristotle and Hegel provide classic efforts to carry through this conceptualization, for which Hans Jonas provides one of the rare recent contributions in his *The Phenomenon of Life: Toward a Philosophical Biology* (Evanston, IL: Northwestern University Press, 2001).

14. As we shall see in the examination of consciousness, Aristotle's privileging of touch proves to be valid, at least with regard to perception and the understanding that follows from it.

15. This lack of discrimination may be thought of as primary in psychological development. So Macmurray observes that “we have no ground for thinking that the new-

born child can distinguish between a feeling of pain, a feeling of sickness and a feeling of hunger." John Macmurray, *Persons in Relation* (Amherst, NY: Humanity Books, 1999), 57. Yet insofar as mind is from the start both sentient and irritable, its urges operate at least in function of a difference between felt wants and felt satisfactions. Accordingly Macmurray acknowledges "an original capacity to distinguish, in feeling, between comfort and discomfort" (ibid., 57). Yet, given the immediacy of feeling, it is questionable whether this distinguishing involves at first anything more than the incitement of different behaviors.

16. Hegel, *Philosophy of Mind*, §402, 88.

17. See Hegel, *Philosophy of Mind*, Zusatz to §401, 80.

18. Ibid.

19. In this manner, Harris describes how the self-maintaining drive of organic process manifests itself in the felt complex as unpleasant, when adaptation is deficient, and pleasant, when adaptation is succeeding. See Harris, *The Foundations of Metaphysics in Science*, 315.

20. As Hegel puts it, "[das] Gefühl eines Nichtseins is Trieb, Bedürfnis." See G. W. F. Hegel, *Vorlesungen über die Logik: Berlin 1831 Nachgeschreiben von Karl Hegel*, ed. Udo Rameil and Hans-Christian Lucas (Hamburg: Felix Meiner Verlag, 2001), 7.

21. To capture this distinction, Hegel, for one, employs different terms, *Empfindung* (for the nonobjective sensation that is felt) and *Gefühl* (for the feeling of the psyche). See Hegel, *Philosophy of Mind*, §402, 88.

22. Sternberg observes that the connection of how and what we feel is exhibited in the way in which "'feeling sick' implies both a sensory and an emotional component." See Esther M. Sternberg, *The Balance Within: The Science Connecting Health and Emotions* (New York: W. H. Freeman and Company, 2001), 16.

23. See Hegel, *Philosophy of Mind*, Zusatz to §402, 89.

24. To paraphrase Hegel, through feeling, the psyche posits its determinacy, initially given by nature, as an ideal moment, contained within it, and in so doing relates to itself and becomes self-relating. See Hegel, *Philosophy of Mind*, Zusatz to §402, 88.

25. Hence, Hegel can term the psyche the ideality or negativity of all the kinds of sensations, in which the psyche is an infinite being-for-self. The psyche is their ideality or negativity because it contains them all as that which is other to them as they get supplanted by other feelings. The psyche is infinite self-relation because in feeling, it does not relate to anything beyond. Every feeling is contained within it. See Hegel, *Philosophy of Mind*, Zusatz to §402, 90.

26. See Hegel, *Philosophy of Mind*, Zusatz to §402, 91.

27. Ibid.

28. Willem A. deVries, *Hegel's Theory of Mental Activity* (Ithaca, NY: Cornell University Press, 1988), 76.

29. Hegel, *Philosophy of Mind*, Zusatz to §402, 92.

30. See chapter 9.

31. Hegel, *Philosophy of Mind*, §404, 94.

32. Strawson's thought experiment to explore the limits of a purely auditory consciousness suggests how the identity of the self and temporality remain problematic without some spatial perception. Even the contrast of a background tone and particular

sounds cannot secure the unity of awareness (and by extension, the unity of perceived temporality). See P. F. Strawson, *Individuals: An Essay in Descriptive Metaphysics* (London: Routledge, 1959), chapter 2, 59–86.

33. To paraphrase Hegel, the content of the psyche is its particular world included in the ideality of the subject. See Hegel, *Philosophy of Mind*, §404, 94.

34. Hegel points out the last option and addresses it in his analyses of mental illness. See Hegel, *Philosophy of Mind*, §404, 94, and the long Zusatz to §406, 105ff.

35. Macmurray, *The Self as Agent*, 121–22. As Macmurray notes, motive feeling “is not a feeling of movement, which would imply a distinguishing of the movement from the feeling” (ibid., 121). If that were the case, feeling would be rendered a conscious sensation of movement. Similarly, motive feeling “selects the direction of the movement, without being an awareness of selection,” thereby making “a variation of movement in reaction possible which would not occur without it” (ibid., 121). To be aware of the selection, mind would already have to be conscious of its world and its own physical movements, as well as apprehend its choice, all of which goes beyond the self-communion of the psyche.

36. Macmurray confusedly imputes a noncognitive consciousness to this feeling, describing the “bare capacity to distinguish between comfort and discomfort” as that below which “we are left with an organism which reacts to stimulus without consciousness.” Macmurray, *The Self as Agent*, 120. He uses “consciousness,” however, in ways that fit the psyche, writing, “If by cognition, we mean knowledge, then consciousness is never cognitive, since knowledge depends upon the awareness of a distinction between Self and Other” (ibid., 119).

37. Hegel erroneously suggests that a child in the womb is in undivided psychic unity with the mother’s mind since the fetus is incapable of offering any resistance to the influence of the mother. This would only be true if the fetus has no internally generated sensations and all external sensations derive from the mother’s psychosomatic influence. See Hegel, *Philosophy of Mind*, §405, 95.

38. Hegel does admit that the fetus has at least a formal self-relation, even when its existence depends upon its mother, whose independent psyche makes itself manifest in the fetus, thanks to the corporeal realization of the mother’s inner feelings. This “formal self-relation” must have some material reality if the fetus is to be ascribed feelings at all, which to be felt by it, rather than its mother, must be the fetus’s own self-feeling. See Hegel, *Philosophy of Mind*, Zusatz to §405, 99–100.

39. Hegel discusses this type of psychic influence, where the pregnant mother is the genius over the child she still carries. See Hegel, *Philosophy of Mind*, §405, 95.

40. Sternberg, *The Balance Within*, 146.

41. Evan Thompson describes the neurophysiological “mirror neuron” basis of this “affective resonance” in *Mind in Life: Biology, Phenomenology, and the Sciences of Mind* (Cambridge, MA: Harvard University Press, 2007), 394–95.

42. Hence, when Hegel analyzes hypnosis (“magnetic sleep”) as a case of what he calls “magical” influence upon the psyche, he must assume consciousness and intelligence on the part of both hypnotizer and hypnotized. Only on that basis can the hypnotized subject become a relatively self-less individual who has the consciousness of the hypnotizer as a controlling genius. See Hegel, *Philosophy of Mind*, §406, 103–04.

43. Hegel notes the absence of these relationships at this stage, suggesting that direct opposition of the psyche to objective consciousness is what comes on the scene in insanity. See Hegel, *Philosophy of Mind*, Zusatz to §405, 98.

44. *Ibid.*, 99.

45. Hegel describes the psyche's self-feeling as a judgment in itself, insofar as the psyche here differentiates itself into a particular determination to which its self is immediately connected, a self that is the universal pervading all its feelings. See Hegel, *Philosophy of Mind*, §407, 122.

46. For a systematic account of this type of judgment and the reflected universality of class membership, see G. W. F. Hegel, *Science of Logic*, trans. A. V. Miller (Humanity Books: New York, 1969), 643–50.

47. Already Darwin takes it to be beyond doubt that habitual excitation of nerve-cells makes them undergo some physical change. See Charles Darwin, *The Expression of the Emotions in Man and Animals* (Chicago: The University of Chicago Press, 1965), 29. It is debatable, however, whether such changes are inheritable, as Darwin repeatedly suggests. See *ibid.*, 29, 40, 42, 61. For a discussion of how modern research suggests that the self-maintenance of the organism may make certain environmentally induced characters genetically assimilated, see Harris, *The Foundations of Metaphysics in Science*, 242–47.

48. In this way, Darwin observes, reflex actions become acquired which are performed without any sensation, even if first performed consciously. See Darwin, *The Expression of the Emotions in Man and Animals*, 35, 39.

49. These considerations preclude Hegel's claim that there is a necessary conceptual progress from insanity to habit. See Hegel, *Philosophy of Mind*, §410, 143. Although habit may permit the psyche to achieve an untroubled self-communion in every particular feeling that recurs, this unity cannot arise from the conflict of insanity, where, on Hegel's account, mind is torn by contradiction between obsession with some fixed idea and its objective consciousness. Because insanity involves consciousness, it cannot precede habit, whose detachment from immediate feeling provides a necessary preparation for the emergence of the subject-object dichotomy basic to conscious awareness. Habit may allow the psyche to be at home with itself in its feelings, moving about with freedom, but the resolution of insanity involves being at home with oneself in conscious objectivity, a much more demanding task. Thus, the insane can, and indeed, must have habits, for without them, they could not fixate on any ideas at odds with objectivity.

Notes to Chapter 7

1. As Ronna Burger points out, in analyzing Aristotle's account of habit, "Habituation presupposes that nature as given is not altogether determinative; if it were, that would make training both unnecessary and impossible. The evidence to which Aristotle appeals, however, comes not from an investigation of nature but from the intention of the legislature, which is to make the citizens good by habituation (1130b2–6). The law aims to produce a 'second nature' by molding human character, while the tools it employs—praise and blame, reward and punishment—presuppose that the agent is responsible for what he

does.” Ronna Burger, *Aristotle’s Dialogue with Socrates* (Chicago: University of Chicago Press, 2008), 51. The ethical habituation to which Aristotle refers involves rational agents disposing over linguistic intelligence, as well as the legislative activity of political association. “Praise and blame” can enter into habit formation in that context. Habit, minimally considered as a primary self-formation of the psyche, does not yet involve “praise or blame,” but only requires repetition of feeling and associated behavior.

2. Aristotle, *Nicomachean Ethics*, Book 2, chapters i–iv, 1103a–1105b, in *The Complete Works of Aristotle*, vol. 2, ed. Jonathan Barnes (Princeton, NJ: Princeton University Press, 1984), 1742–1746.

3. Even here, habit need not involve much engagement of rational intelligence. As Michael B. Foster observes, *Hexis*, although “the internal spring of virtuous conduct, and at the same time the indispensable condition of fulfillment of law,” differs from ethical will “in that it does not presuppose and supervene upon an insight into the rational necessity of the law.” Michael B. Foster, *The Political Philosophies of Plato and Hegel* (Oxford: Oxford University Press, 1968), 125.

4. As Macmurray observes, “insofar then as an agent acts habitually, he acts from a motive, but not with intention.” John Macmurray, *The Self as Agent* (Amherst, NY: Humanity Books, 1991), 196.

5. G. W. F. Hegel, *Philosophy of Mind*, being *Part Three of the Encyclopaedia of the Philosophical Sciences 1830*, trans. William Wallace together with the *Zusätze in Boumann’s Text 1845*, trans. A. V. Miller (Oxford: Oxford University Press, 1977), §410, 140.

6. As Hegel puts it, habit’s abstract realization of the psyche in its body is not the existence of the universal which is for the universal. See Hegel, *Philosophy of Mind*, §409, 139. Habit has a particular being, with a content extraneous to the unity of the psyche.

7. This universality is abstract in character, since it arises, as Hegel observes, from the repetition of single instances, whose diversity is not determined by what they share in common. See Hegel, *Philosophy of Mind*, §410, 144.

8. *Ibid.*

9. As Peirce writes, albeit in extending the operation of habit to things in general, “this tendency [to take habits] itself constitutes a regularity . . . It is a generalizing tendency; it causes actions in the future to follow some generalizations of past actions; and this tendency is itself something capable of similar generalizations; and thus, it is self-generative.” See Charles S. Peirce, *Writings of Charles S. Peirce: Volume 6 1886–1890*, ed. Christian J. W. Kloesel (Bloomington: Indiana University Press, 2000), 208.

10. Hegel, *Philosophy of Mind*, §410, 144.

11. *Ibid.*, 145.

12. As Macmurray observes, this means that habits, unlike instincts, can be relinquished. See Macmurray, *The Self as Agent*, 161.

13. Hegel, *Philosophy of Mind*, §410, 140.

14. *Ibid.*

15. As habituation allows attention to focus elsewhere, it equally makes it possible for even pain to be ignored when mind distracts itself by attending to something else. See Karl Popper and John C. Eccles, *The Self and Its Brain: An Argument for Interactionism* (London: Routledge, 1998), 127.

16. As Popper points out, repetition renders such action an unproblematic routine, comprising an unproblematic background know-how, now psychologically formed into an unconscious disposition. See Popper and Eccles, *The Self and Its Brain*, 134.

17. Hegel, *Philosophy of Mind*, §410, 143.

18. This freedom of attention can, of course, take pathological forms, when, for example, an individual has a monomaniacal focus on one matter to the exclusion of paying attention to anything else. Ramachandran suggests that this is the case with autistic savants, whose brain allocates all its attention to one “module,” such as one concerning calculation, enabling them to achieve remarkable mental feats while being completely oblivious to what must be attended to for normal interaction with others. See V. S. Ramachandran, *A Brief Tour of Human Consciousness* (New York: Pi Press, 2004), 53–54.

19. Hegel, *Philosophy of Mind*, §410, 142.

20. Ibid.

21. Hegel, *Philosophy of Mind*, §410, 147.

22. Ibid., 142.

23. John Macmurray, *Persons in Relation* (Amherst, NY: Humanity Books, 1999), 54.

24. Ibid., 56.

25. Hegel, *Philosophy of Mind*, §410, 146.

26. Hegel contrasts habit and memory, describing habit as “the mechanism of self-feeling, as memory is the mechanism of intelligence.” See Hegel, *Philosophy of Mind*, §410, 141.

27. Memory can be considered a more developed form of habit, involving not just the psyche, but consciousness and intelligence, for as Charles Peirce observes, “My memory does not consist in any vision but in a habit by virtue of which I can recognize a newly presented color as like or unlike one I had seen before.” See Peirce, *Writings of Charles S. Peirce*, 185.

28. As Henri Bergson puts it, habit, like the memory of a lesson, “is lived and acted, rather than represented.” Henri Bergson, *Matter and Memory* (New York: Cosimo Classics, 2007), 91.

29. “Its recognition must be lived rather than thought,” for “habit . . . acts our past experience but does not call up its image.” Bergson, *Matter and Memory*, 94, 195.

30. Ibid., 197.

31. Peirce, *Writings of Charles S. Peirce*, 191.

32. Ibid. Moreover, as Peirce notes, because habit is “directed to definite ends, namely the removal of sources of irritation,” it operates according to final causes, in line with what may be considered “the general formula of all our desires . . . to remove a stimulus” (ibid., 193).

33. As Popper observes, because states of mind are not external sequences of elements, any theory of a one to one correspondence between mental and brain events must be abandoned. See Popper and Eccles, *The Self and Its Brain*, 90.

34. As Hegel puts it, this enables the psyche to exist as substance in its body. See Hegel, *Philosophy of Mind*, §410, 142.

35. Ibid., §411, 147.

36. For a systematic treatment of the logic of actuality, see G. W. F. Hegel, *Science of Logic*, trans. A. V. Miller (New York: Humanities Press, 1976), 529ff.

37. As Hegel points out, animal vocalizations can figure as mere expressions of sensation and drive. See Hegel, *Philosophy of Nature*, vol. 3, ed. and trans. M. J. Petry (London: George Allen and Unwin, 1970), addition to para. 351, 105. Such vocalizations can also function communicatively as preverbal signalings, presupposing consciousness of self and others, but exhibiting no linguistic intelligence. See Karl Popper, *The Open Universe: An Argument for Indeterminism*, from the *Postscript to the Logic of Scientific Discovery* (Totowa, NJ: Rowman & Littlefield, 1982), 154, on this expressive, signaling function of animal “language.”

38. Charles Darwin, *The Expression of the Emotions in Man and Animals* (Chicago: The University of Chicago Press, 1965), 50.

39. In this vein, Darwin argues that the nature of expression depends chiefly on the kind of actions habitually performed under the particular state of mind it manifests. See Darwin, *The Expression of the Emotions in Man and Animals*, 237.

40. *Ibid.*, 13–14.

41. Similarly, Darwin tests his conclusions by determining whether the same general principles putatively governing the expression of emotion apply equally to humans and lower animals. See Darwin, *The Expression of the Emotions in Man and Animals*, 18.

42. Darwin does, however, emphasize that the emotive expressions determined by his three principles of expression are all first performed voluntarily, so that consciousness and will are required for their genesis. This could only be reconciled with emotive expression in infants, human and animal, if acquired behavior were inheritable. See Darwin, *The Expression of the Emotions in Man and Animals*, 352–53. Darwin also points out that inherited expressions, once acquired, can be voluntarily used to communicate. See *ibid.*, 355.

43. *Ibid.*, 15, 266.

44. As Esther Sternberg observes, “from a species point of view” universally recognizable expressions serve “to communicate our feelings to the group so that other members can react.” Esther Sternberg, *The Balance Within: The Science Connecting Health and Emotions* (New York: W. H. Freeman, 2001), 139.

45. Darwin suggests that recognition of inherited expressions would also become inherited, after becoming habitual, citing examples of animals who appear to recognize cries of distress instinctively. See Darwin, *The Expression of the Emotions in Man and Animals*, 356–57.

46. Darwin describes such habituation under the heading of the “principle of serviceable associated habits,” where habit leads to gestures being performed when they no longer serve any use. See Darwin, *The Expression of the Emotions in Man and Animals*, 28.

47. Hegel emphasizes this point in his *Philosophy of Mind*, addition to §411, 148, explaining how such free gestures are concentrated in the face, carriage, and hands, which best express intelligence and will. Although he treats this form of gesture as if it were germane to the analysis of the “actual psyche,” it properly falls within the treatments of consciousness and intelligence.

48. Hegel, *Philosophy of Mind*, Zusatz to §411, 150.

49. *Ibid.*

50. *Ibid.*, §410, 145.

51. Ibid., 146.
52. Ibid.
53. Ibid., §412, 151.
54. Ibid., 151.
55. Whereas an abstract universal leaves undetermined everything else about the particulars in which it inheres, a genus is more concretely universal, insofar as the genus has differentia inherent in it, by which its unity mandates its species, albeit without distinguishing the individuals that belong to them.
56. Hegel, *Philosophy of Mind*, §412, 151.
57. Immanuel Kant famously makes this point in his “Transcendental Deduction of the Categories,” *Critique of Pure Reason*, trans. and ed. Paul Guyer and Allen W. Wood (Cambridge: Cambridge University Press, 1998), A116–117, B132.
58. Hegel, *Philosophy of Mind*, Zusatz to §412, 152.
59. Ibid.
60. Popper and Eccles, *The Self and Its Brain*, 127.
61. Hegel maintains that the self-related universal exists nowhere else but in the “I” of consciousness. See Hegel, *Philosophy of Mind*, Zusatz to §412, 152.
62. Ibid.
63. Ibid.
64. Ibid., Zusatz to §402, 91.
65. Ibid.
66. Murray Greene suggests this in his book, *Hegel on the Soul: A Speculative Anthropology* (The Hague: Martinus Nijhoff, 1972), 141. Greene claims, interpreting Hegel, that I “cannot distinguish a content of mine as ‘other’ than myself” unless I can “say or think, ‘I am’” (ibid., 142). Not only does this preclude consciousness in dumb animals and prelinguistic children, but it contradicts Hegel’s own account of how the development of consciousness provides a “deduction” of intelligence (e.g., Spirit), something only possible if consciousness can be without already comprising discursive rationality.

Notes to Chapter 8

1. Immanuel Kant, *Critique of Pure Reason*, trans. and ed. Paul Guyer and Allen W. Wood (Cambridge: Cambridge University Press, 1998), A116–17, B132.
2. As Hegel points out, consciousness here exhibits the logic of self-relation as well as appearance: “Consciousness, even as such, contains in principle the determination of being-for-self in that it *represents* to itself an object which it senses, or intuits, and so forth; that is, it has *within it* the content of the object, which in this manner has an ‘ideal’ being; in its very intuiting and, in general, in its entanglement with the negative of itself, with its other, consciousness is still only in the presence of its own self. Being-for-self is the polemical, negative attitude toward the limiting other, and through this negation of the latter is a reflectedness-into-self, although *along* with this return of consciousness into itself and the ideality of the object, the *reality* of the object is *also* still preserved, in that it is *at the same time* known as an external existence. Consciousness thus belongs to

the sphere of *Appearance*, or is the dualism, on the one hand of knowing an alien object external to it, and on the other hand of being for its own self, having the object ideally [*ideell*] present in it; of being not only in the presence of the other, but therein being in the presence of its own self. *Self-consciousness*, on the other hand, is being-for-self as *consummated* and *posited*; the side of connexion with an other, with an external object, is removed." See G. W. F. Hegel, *Science of Logic*, trans. A. V. Miller (New York: Humanities Press, 1976), 158.

3. John Macmurray, *The Self as Agent* (Amherst, NY: Humanity Books, 1991), 109.

4. Robert Berman emphasizes this point in his essay "Reason, Idealism, and the Category: Kantian Language in Hegel's *Phenomenology of Spirit*" (forthcoming), 4–5.

5. Macmurray writes, "The Self does not first know itself and determine an objective; and then discover the other in carrying out its intention. The distinction of Self and Other is the awareness of both; and the *existence* of both is the fact that their opposition is a practical, and not a theoretical opposition. For if we posit the primacy of the theoretical, the distinction would fall within the Self and be purely logical." Macmurray, *The Self as Agent*, 109. Macmurray proceeds, however, to uphold the primacy of the practical as something with epistemological consequences, thereby falling into the trap of giving knowing foundations.

6. Macmurray, *The Self as Agent*, 118. As Macmurray goes on to observe, "the mind-body problem is therefore fictitious" (*ibid.*, 118).

7. "Thus what was at first only *our* object, does indeed become an object for mind itself, but the 'I' does not as yet know that what confronts it is natural mind itself." G. W. F. Hegel, *Philosophy of Mind*, being *Part Three of the Encyclopaedia of the Philosophical Sciences 1830*, trans. William Wallace together with the *Zusätze in Boumann's Text 1845*, trans. A. V. Miller (Oxford: Oxford University Press, 1977), Zusatz to §387, 27.

8. Although Searle does not conceive how the preconscious mental activity of the psyche makes consciousness possible, he does maintain that "*the notion of an unconscious mental state implies accessibility to consciousness*. We have no notion of the unconscious except as that which is potentially conscious." See John R. Searle, *The Rediscovery of the Mind* (Cambridge, MA: The MIT Press, 1994), 152.

9. As Macmurray observes, "sense presupposes feeling and is necessarily accompanied by it, even if the feeling is not attended to" (Macmurray, *The Self as Agent*, 123) so that "mere sensation, unassociated with feeling, is an impossibility" (*ibid.*, 197).

10. Popper notes, "Although there exists, no doubt, something that may be described as unconscious memory—that is, memory of which we are not aware—there cannot be, I propose, consciousness or awareness without memory . . . a certain minimum span of continuity of memory is needed for consciousness . . . to arise." See Karl Popper and John C. Eccles, *The Self and Its Brain: An Argument for Interactionism* (London: Routledge, 1998), 69–70. See also Macmurray, *The Self as Agent*, 131.

11. Although Searle maintains that consciousness and intentionality are essentially connected, in that mental states are either actual or potential conscious states, he claims that "there are many conscious states that are not intentional." John Searle, *Mind, Language, and Society: Philosophy in the Real World* (New York: Basic Books, 1998), 76. Searle, however, has no examples to offer of conscious nonintentional states, without reverting to states of mind that fall within the psyche. Thus, in *Intentionality*, Searle

presents “a sudden sense of elation” and “anxiety” (John Searle, *Intentionality: An Essay in the Philosophy of Mind* [Cambridge: Cambridge University Press, 1983], 2) as nonintentional conscious states, even though they amount to feelings lacking any determinate awareness of objects.

12. Hegel exposes this problem in the introduction to the *Phenomenology of Spirit*. See G. W. F. Hegel, *Phenomenology of Spirit*, trans. A.V. Miller (Oxford: Oxford University Press, 1977), 53ff.

13. Ramachandran makes this point. See his *A Brief Tour of Human Consciousness* (New York: Pi Press, 2004), 105.

14. Ramachandran so describes both these cases in *A Brief Tour of Human Consciousness*, 105.

15. Katharina Dulceit, “Atomism, the Theory of Acquaintance, and the Hegelian Dialectic,” in *Perspektiven der Philosophie, Neues Jahrbuch 1990*, Band 16—1990, (Amsterdam: Rodopi, 1990), 229, which paraphrases Hegel’s account on p. 58 of his *Phenomenology of Spirit*. Drawing upon Hegel’s phenomenological description of sense-certainty in his *Phenomenology of Spirit*, Dulceit here critiques the position that takes sense-certainty’s criterion of immediacy as a valid basis for reference to and knowledge of particulars.

16. As Dulceit points out, taking this aspect of the immediacy of sensuous consciousness as paradigmatic of cognition and “insisting on the passivity of consciousness is analogous to insisting that meaning is entirely outside of the head.” Katharina Dulceit, “Language, Objects, and the Missing Link: Toward a Hegelian Theory of Reference,” in *Hegel and Language*, ed. Jere O’Neill Surber (Albany: SUNY Press, 2006), 157. Such a theory of meaning will therefore fail to account for the determinacy of meaning, as exhibited in the “qua-problem” that plagues it.

17. As Dulceit observes, “Russell notion of acquaintance is analogous” to sensuous consciousness and since immediate awareness of the sensuous manifold cannot determinately discriminate any objects, reference to particulars cannot be achieved by mere acquaintance. See Dulceit, “Atomism, the Theory of Acquaintance, and the Hegelian Dialectic,” 229.

18. For this reason, Hegel can rightly claim that sensuous consciousness proper does not involve consciousness of time or space. As he writes in the *Philosophy of Mind*, §418, 159, “Spatial and temporal Singularity, *here* and *now* . . . strictly belongs to *intuition*. At present the object is at first to be viewed only in its correlation to *consciousness*, i.e., a something *external* to it, and not yet as external on its own part, or as being beside and out of itself.” The *Phenomenology of Spirit*’s account of sense-certainty employs reference to “here” and “now” in order to speak for sense-certainty in its attempt to certify its own truth claims. This is permissible since the *Phenomenology of Spirit* is not giving a systematic account of consciousness, but an immanent critique of the foundational position that takes the opposition of consciousness to be the insurmountable framework of knowledge. Accordingly, the *Phenomenology of Spirit* observes the epistemological project of taking consciousness as the principle of knowledge. It remains to be seen whether awareness of time and space is available only to intelligence, as Hegel seems to indicate by placing the intuitions of time and space in his analysis of Spirit.

19. Nonetheless, as Dulceit suggests, consciousness cannot confront “just one sense datum” because the mediations required to provide determinacy ensure that sensation is

a manifold, providing the material for a plurality of things. See Dulckeit, "Atomism, the Theory of Acquaintance, and the Hegelian Dialectic," 233.

20. Kant's analysis of the unity of apperception suggests that the syntheses underlying temporal and spatial perception involve understanding as well as intuition. This becomes apparent in his Transcendental Deduction of the Categories.

21. "Of nothing but the fleeting instant can we have absolutely immediate consciousness. . . . We can draw no inference in an instant, nor can we recognize any inferential conclusion. We can neither divide nor synthesize; we can only feel. . . . We cannot compare any subsequent feeling with it, as immediate feeling, because we cannot have the second in our mind until the first has utterly gone from us . . . nothing can resemble an immediate feeling, for resemblance supposes a dismemberment and recomposition which is totally foreign to the immediate, and in the second place, memory is an articulated complex and worked-over product which differs infinitely and immeasurably from feeling." See Charles S. Peirce, *Writings of Charles S. Peirce: Volume 6 1886–1890*, ed. Christian J. W. Kloesel (Bloomington: Indiana University Press, 2000), 184. Insofar as Peirce here speaks of feeling in connection with consciousness, the feeling comprises sensation of what confronts mind as objective being.

22. As Jonas observes, "the several senses, in differing degrees, eliminate the imprint of their own causal constitution from the integration of their imagery" without which sensation of existence would be impossible. See Jonas, *The Phenomenon of Life: Toward a Philosophical Biology* (Evanston, IL: Northwestern University Press, 2001), 29.

23. Jonas describes this as it applies to perception, writing, "Perception as such, and vision particularly, secure that standing back from causal involvement which frees the experient for observation and opens a horizon for elective attention." Jonas, *The Phenomenon of Life*, 31.

24. *Ibid.*, 29.

25. "Where qualities are perceived, the raw material is action: impacts, hustlings, clashes on a molecular scale. Organisms not far exceeding that scale can therefore have no perception, but the collision experience only" (*ibid.*).

26. So Macmurray writes, "The stimulation of a special sense provides, up to a certain maximum of intensity, a clearer presentation; beyond this maximum only a feeling of pain." Macmurray, *The Self as Agent*, 123.

27. Bergson notes the generality of this predicament, observing that "there is hardly any perception which may not, by the increase of the action of its object upon our body, become an affection, and more particularly, pain." See Henri Bergson, *Matter and Memory* (New York: Cosimo, 2007), 53.

28. As Macmurray points out, "If the stimulus is decreased sufficiently, we reach a point where we 'feel,' rather than 'sense' something." Macmurray, *The Self as Agent*, 123.

29. Aristotle, *De Anima*, Book 3, chapter 2, 425b11–18, in *The Complete Works of Aristotle*, vol. 1, ed. Jonathan Barnes (Princeton, NJ: Princeton University Press, 1984), 677.

30. Hegel seems to fall into this trap in the *Zusatz* to §413 of his *Philosophy of Mind*, writing that "only when I come to apprehend myself as 'I,' does the Other become objective to me, confronts me," just as, conversely, "the 'I' is manifest to itself only in so far as its Other is manifest to it in the shape of something independent of it." Hegel, *Phi-*

losophy of Mind, 154. Nonetheless, Hegel cannot maintain his own distinction between consciousness and self-consciousness unless the self-relation accompanying awareness of the Other is prereflective.

31. Jean-Paul Sartre, *Being and Nothingness*, trans. Hazel E. Barnes (New York: Washington Square Press, 1956), 12–14.

32. Searle, *Mind, Language, and Society*, 73.

33. This is why Hegel, in the *Phenomenology of Spirit*, suggests that we must speak for consciousness in describing the shape of consciousness of sense-certainty, for this shape lacks the resources for conceptual, verbal articulation. See Hegel, *Phenomenology of Spirit*, 60.

34. Although Searle does not systematically distinguish between consciousness and intelligence, he does recognize that “we cannot explain the intentionality of the mind by appealing to the intentionality of language, because the intentionality of language already depends on the intentionality of mind.” Searle, *Mind, Language, and Society*, 90.

35. Wilfrid Sellars offers a classic statement of such an argument in his *Empiricism and the Philosophy of Mind* (Cambridge, MA: Harvard University Press, 1997).

36. Searle points to these prelinguistic intentionalities in *Intentionality*, 5.

37. As Dulceit observes, “instead of a particular ‘this’ of which it is so certain, consciousness ends up with a general ‘this-as-such,’ an empty being, devoid of inner distinctions and indistinguishable from any other ‘this.’ . . . Sense certainty fails because neither immediacy nor direct reference can secure a referential link to objects of experience.” Dulceit, “Language, Objects, and the Missing Link,” 158. Indeed, “direct reference is a contradiction in terms” (*ibid.*, 159).

38. This suggests that, as Dulceit concludes, “if reference is to be possible, neither subject nor object can be bare, nor can the relationship between them be direct.” Dulceit, “Language, Objects, and the Missing Link,” 159.

39. Chapter 1, “Sense-Certainty” of Hegel’s *Phenomenology of Spirit* provides a phenomenological analysis of how this is so.

40. For an analysis of these different types of universality and of the forms of judgment they inhabit, see Richard Dien Winfield, *From Concept to Objectivity: Thinking through Hegel’s Subjective Logic* (Aldershot, UK: Ashgate, 2006), chapter 6, “The Forms of Judgment and the Types of Universals.”

41. As Dulceit observes, “consciousness cannot even *pick out* its object without mediation. To ‘pick out’ the object is just what we do when we refer to it.” Katharina Dulceit, “Can Hegel Refer to Particulars?” in *The Phenomenology of Spirit Reader: Critical and Interpretative Essays*, ed. Jon Stewart (Albany: SUNY Press, 1998), 116. By engaging in the mediating activity of “picking out” particular unities of content in the sensuous manifold, perception refers to things with properties without needing to invoke language. Indeed, as Dulceit point outs that language “remains *abstractly universal*” unless “in its actual *use*, within a *context*, it accomplishes precisely what otherwise would be impossible: it *determines and thus universalizes the individual*, and in this way achieves the meeting between the universal (the word) and the individual (the object) which we will call ‘reference’” (*ibid.*, 117–18).

42. As Macmurray notes, such is the predicament confronting the dualistic standpoint of the “cogito.” See Macmurray, *The Self as Agent*, 104.

43. Hegel gives the basic outline of this development in para. 419 of the *Philosophy of Mind*.

44. As Errol Harris observes, in the history of philosophy, theorists of perception have ignored this absence of reflection by consciousness upon its own associating activity when it perceives a thing. They instead depict consciousness's "idea" of an "external" thing as an image or a representation of its object, as if the perceptual "image" or "representation" represents the relation between itself and its archetype. Consciousness, however, is not itself aware of its own associative activity in perceiving some thing. That awareness requires intelligence, which apprehends its mental content as *both* its own product and as an objective determination. See Errol Harris, *An Interpretation of the Logic of Hegel* (Lanham: University Press of America, 198), 111–12.

45. Yet as Dulkeit observes, "if particulars are concrete, that is, if they involve universality, then it obviously does not follow merely from the universality of language that we cannot refer to bare particulars." See Dulkeit, "Can Hegel Refer to Particulars?" 111. "For whatever I meet in experience is already determined at least minimally. And whatever is determined sufficiently to be something for me, is determined sufficiently to permit reference—at least minimally—even if I should do no better than point to it or grunt at it" (*ibid.*, 113). Since determinate things cannot be or be perceived as merely "bare particulars," their apprehension must be mediated and this mediation is always at hand in the concrete context of perception, as well as in the concrete aspects of objectivity and of mind, without having to first encounter mediation in the universality of language.

46. For a detailed analysis of why concept, judgment, and inference (syllogism) involve self-determined determinacy that goes beyond the determined determinacies of categories of essence, see Winfield, *From Concept to Object to Objectivity*, chapters 4–7, pp. 51–130.

47. As Jonas writes, "Perception in itself, however, knows nothing of representation; it recognizes only simple presentation, where everything stands for itself and nothing stands for anything else. Perception is a direct rendering of what is present in its presentness." See Hans Jonas, *Mortality and Morality: A Search for the Good after Auschwitz* (Evanston, IL: Northwestern University Press, 1996), 80.

48. "In fact, there is for us nothing that is instantaneous," Bergson notes accordingly. Bergson, *Matter and Memory*, 76.

49. This is why a consciousness restricted to hearing series of sounds would have difficulty perceiving anything objective. P. F. Strawson's analysis of a nonspatial auditory world delineates the problem. See Strawson, *Individuals: An Essay in Descriptive Metaphysics* (London: Methuen, 1979), 59–86.

50. As Jonas observes, with respect to the sense of vision, "perception continuously 'abstracts' from the immediate sensory content of affection in allowing the object its identity beyond the change of its views. We see not once this, once that, complex of data, but through both the same thing, 'abstracting' as it were from the differences of successive sensations, or from the sense 'material.'" Jonas, *The Phenomenon of Life*, 168.

51. So Popper is correct to observe that "a certain minimum span of continuity of memory is needed for consciousness or awareness to arise," at least with respect to per-

ception and all forms of consciousness that follow from it. See Popper and Eccles, *The Self and Its Brain*, 70.

52. Bergson draws out the implications, noting that “the real, concrete, live present—that of which I speak when I speak of my present perception—that present necessarily occupies duration” and that, since the conscious subject is an embodied being whose needs call for action, the perceived present “must be both a perception of the immediate past and a determination of the immediate future,” a present which “is, in its essence, sensori-motor.” Bergson, *Matter and Memory*, 176, 177.

53. This, of course, is why Locke finds himself required to introduce the notion of “substance” as that which comprises nothing but the inexplicable substrate possessing the power to unite simple sensations, whose contingent associations in experience can have no other explanation. The brute simplicity of sensations precludes them from containing anything that could link some and separate others. All their content can do is make them identical or different.

54. Bergson portrays this grounding of perception as all-pervading, as if *nothing* could be perceived that is not of potential use, claiming that “perception consists in detaching, from the totality of objects, the possible action of my body upon them. Perception appears, then, as only a choice . . . its office . . . is to eliminate from the totality of images all those on which I can have no hold.” Bergson, *Matter and Memory*, 304.

55. In this respect, the perception of existence reflects how “my present is that which interests me, which lives for me, . . . which summons me to action.” Bergson, *Matter and Memory*, 176. As Bergson notes (*ibid.*, 227), when this interest is absent, and the subject has no living relation to what it perceives, present “perception” has difficulty manifesting any reality that would distinguish it from dreams or illusion. This is why, Bergson observes, “where the connecting links between sensations and movements are slackened or tangled, the sense of the real grows weaker or disappears” (*ibid.*, 229).

56. As Hegel observes, “the successive steps in further specification of consciousness, does not, to it, seem to be its own activity, but is implicit, and to the ego it seems an alteration of the object.” Hegel, *Philosophy of Mind*, §415, 155.

57. As Damasio observes, “Signals from the outside are thus *double*. Something you see or hear excites the special sense of sight or sound as a ‘nonbody’ signal, but it also excites a ‘body’ signal hailing from the place in the skin where the special signal entered.” Hence, “when you see, you do not just see: *you feel you are seeing something with your eyes*.” See Antonio Damasio, *Descartes’ Error: Emotion, Reason, and the Human Brain* (New York: Penguin Books, 2005), 232. Or, as Bergson observes, “My actual sensations occupy definite portions of the surface of my body.” Bergson, *Matter and Memory*, 179.

58. This does not mean that sight immediately and solely by itself perceives *the distance* of things it perceives at a distance.

59. Jonas uses these terms in making these points in *The Phenomenon of Life*, 149.

60. *Ibid.*

61. *Ibid.*

62. *Ibid.*, 142.

63. Thus, “the *motility of our body* . . . is already a factor in the very constitution of seeing and the seen world themselves” (*ibid.*, 152).

64. The degree of this relative causal neutralization depends upon the composition of the perceiver, who, for example, would be more susceptible to photoelectric excitations if somehow (perhaps as a cyborg) partly composed of silicon, as well as upon the frequency and intensity of the electromagnetic radiation.

65. Jonas points this out in *The Phenomenon of Life*, 30–31.

66. Hegel writes, “seeing is a merely theoretical, not yet practical relationship, for in seeing we let things continue to exist in peace and relate only to their ideal side, only as surface.” Hegel, *Philosophy of Mind*, Zusatz to §401, 78. The ideality of the visible, however, is not just restricted to surface, for the theoretical relationship of vision applies also to transparent and translucent objects, whose internal recesses may be visible, but whose visibility leaves their innards virtually unperturbed.

67. Jonas maintains that the “elimination of the causal connection from the visual account . . . suppresses with it every causal aspect in its objects, since their self-containedness vis-à-vis the observer becomes at the same time a mutual self-containedness among themselves,” with the result that “no force-experience, no character of impulse and transitive causality enters into the nature of image” so that “we have to integrate the evidence of sight with evidence of another kind.” Jonas, *The Phenomenon of Life*, 147. What Jonas neglects to recognize is that sense-perception of any sense modality provides no understanding of force so long as its associative activity is restricted to uniting sense properties into a thing. Even though nonvisual senses have a more practical relation to their objects, their perceptions do not themselves provide consciousness of the causal relationships and forces they involve.

68. Although, as Hegel observes, light manifests something other than itself, exhibiting a physical ideality of its own that leaves the illuminated object generally undisturbed (Hegel, *Philosophy of Mind*, Zusatz to §401, 78), this ideality must be qualified. On the one hand, light can affect what it illuminates, through, for example, photoelectric effects as well as ultraviolet and infrared emissions. On the other hand, the frequency of light casts its own color(s) upon what it illuminates.

69. Jonas, *The Phenomenon of Life*, 148.

70. Macmurray writes, “Our seeing it has no causal effect upon it. Seeing is *prima facie* a pure receptivity; to exercise it attentively, we withdraw from action altogether. We stop to look.” Macmurray, *The Self as Agent*, 106.

71. *Ibid.*, 105.

72. “The gain is the concept of objectivity, of the thing as it is in itself as distinct from the thing as it affects me, and from this arises the whole idea of *theoria* and theoretical truth.” Jonas, *The Phenomenon of Life*, 147. Properly speaking, perception provides no concept of objectivity, but only consciousness of a thing with properties. Only with linguistic intelligence will mind be able to engage in *conceiving* objectivity.

73. Jonas observes that “only the simultaneity of image allows the beholder to compare and interrelate: it not only offers, many things at once, but offers them in their mutual proportion, and thus objectivity emerges preeminently from sight.” Jonas, *The Phenomenon of Life*, 144. Jonas further argues that “only sight therefore provides the sensual basis on which the mind may conceive the idea of the eternal, that which never changes and is always present,” which “rests upon an idealization of ‘present’ experienced visually as the holder of stable contents as against the fleeting succession of nonvisual

sensation" (ibid., 145). Yet, the simultaneity of the visual manifold is something different than enduring stability, which requires identity through succession and therefore is available to the other senses.

74. Ibid., 144.

75. "Distance of appearance yields neutral 'image' which, unlike 'effect,' can be looked at and compared, in memory retained and recalled, in imagination varied and freely composed. Thus becomes essence separable from existence and therewith theory possible" (ibid., 148–49).

76. This specter might seem overcome if, as Jonas suggests, "the evidence of sight does not falsify reality when supplemented by that of the underlying strata of experience, notably of motility and touch" (ibid., 149). Yet whether in any particular case the evidence of motility and touch, either in isolation or together with any other senses, can withstand skeptical challenge is debatable, as dreams or hallucinations can attest.

77. Touch, as we shall see, presents the opposite extreme. In contrast to the "causal detachment" of sight, touch experience depends upon immediate contact, involving not just physical contiguity, but feeling the force of some tangible thing resisting the tangible impact of one's own body. To the degree that force manifests the resistant reality of something, touch can be described as "the sense in which the original encounter with reality as reality takes place" and "for this reason, touch is the true test of reality" for everyday experience, as "I can dispel every suspicion of illusion by grasping the doubtful object and trying its reality in terms of the resistance it offers to my efforts to displace it" (ibid., 148). Through impact, touch may provide a perception of the tactile qualities of a thing, but properly speaking, the experience of force involves more than a perceptual association of properties, requiring an *understanding* of dynamic relations.

78. Ibid., 150.

79. As Hegel observes, "The most distant objects originally appear to sight, as we can observe in children, on one and the same surface as those nearest to us, just because sight does not directly see *depth*. Only in noticing that to the depth we have perceived by touch there corresponds something dark, a shadow, do we come to believe that where a shadow becomes visible we see a depth. Connected with this is the fact that we do not directly perceive by sight the measure of the distance of the body but can only infer it from the smaller or greater appearance of objects." See Hegel, *Philosophy of Mind*, Zusatz to §401, 78.

80. George Berkeley observes, "for this end the visive sense seems to have been bestowed on animals, to wit, that by the perception of visible ideas . . . they may be able to foresee (from the experience they have had what tangible ideas are connected with such and such visible ideas) the damage or benefit which is like to ensue upon the application of their own bodies to this or that body which is at a distance. Which foresight, however necessary it is to the preservation of an animal, everyone's experience can inform him." See Berkeley, *Works on Vision*, ed. Colin M. Turbayne (Indianapolis: Bobbs-Merrill, 1963), 46.

81. Jonas, *The Phenomenon of Life*, 151. This advantage depends upon touch enabling sight to perceive depth and three-dimensional spatial magnitude.

82. "These two aspects of the freedom of sight, united in one performance, are the crowning achievement of freedom in the sphere of sentience," writes Jonas in *The Phenomenon of Life*, 151.

83. Jonas points this out in *ibid.*, 152.

84. V. S. Ramachandran, *A Brief Tour of Human Consciousness* (New York: Pi Press, 2004), 8–9.

85. Ramachandran describes many extreme pathological cases of these modifications of visual perception. See V. S. Ramachandran and Sandra Blakeslee, *Phantoms in the Brain* (New York: Harper Perennial, 1998), 127–57.

86. Jonas links these three characteristic features of sight “1) *simultaneity* in the presentation of a manifold, 2) *neutralization* of the causality of sense-affection, 3) *distance* in the spatial and mental senses” to an “*image-performance*,” already involving the abstraction that occurs when imagination produces images from intuitions. Jonas, *The Phenomenon of Life*, 136. Properly speaking, visual sensations remain *perceptions*, bound up with the mediating performance of perception, which merely groups together aspects of the manifold that is sensed. This synthesizing activity is not yet a mental performance that acts upon prior given intuitions. Jonas further suggests that these three features of sight provide a sensory basis to basic philosophical concepts—that “*Simultaneity of presentation* furnishes the idea of enduring present, contrast between change and the unchanging, between time and eternity. *Dynamic neutralization* furnishes form as distinct from matter, essence as distinct from existence, and the difference of theory and practice. *Distance* furnishes the idea of infinity” (*ibid.*, 152). Although this may underlie the classic privileging of sight in metaphorical descriptions of thought, philosophical conceptualization requires leaving sense and intuition behind and employing the linguistic imagination by which concrete universality can be communicated. The account of intelligence will show how this occurs.

87. Jonas writes of “the unique position of sight with respect to simultaneity of presentation, the thesis being that all the other senses operate on the basis of time-series in the presentation of their qualities.” See *ibid.*, 142.

88. Jonas claims that this leaves these senses unable to distinguish between change and unchanging and thus between becoming and being, which, he alleges, is only possible through the simultaneity of sight (*ibid.*, 145). Yet why cannot the blind perceive the difference between change and constancy with any of their other senses, provided they have access to short-term memory? As we shall see, the identification and reidentification of things amidst the flux of sensation is problematic for perception in general, leading consciousness to seek a resolution through the dynamic understanding of force and law.

89. *Ibid.*, 136–37.

90. Aristotle, *De Anima*, Book 2, chapter 2, 413b4, in *The Complete Works of Aristotle*, vol. 1, ed. by Jonathan Barnes (Princeton, NJ: Princeton University Press, 1984), 658.

91. Jonas claims that recognition of the role of short-term retention in time-series presentation “disposes of the rather sterile question whether all sentient life is endowed with memory. In the form of immediate short-term retention, memory enters into the very constitution of sensibility, and is thus coeval with it.” Jonas, *The Phenomenon of Life*, 140. This claim is true if perception necessarily involves at least one sense with a time-series manifold (e.g., touch and proprioception) and if sensibility necessarily involves not just sense-certainty, but perception as well.

92. As Jonas points out, "we understand why for our ears we have nothing corresponding to the lids of our eyes. One does not know when a sound may occur: when it does it gives notice of an event in the environment and not merely of its permanent existence: and since an event, i.e., a change in the environment, may always be of vital import, ears have to be open always for this contingency. . . . With all the initiative left to the outer world, the contingency aspect of hearing is entirely one-sided and requires therefore continual readiness for perception" (ibid., 139).

93. "Things are not by their own nature audible as they are visible. It does not belong to their mere being to emit sound as it belongs to them to reflect light. I can therefore not choose to hear something, but have to wait till something happens to a part of my environment to make it sound, whose sound will strike me whether I choose or not" (ibid., 146).

94. This is because, as Hegel puts it, "just as sight is connected with physicalized space, with light, so hearing is connected with physicalized time, with sound. For in sound, corporeity has become posited as time, as the movement, the vibration of the body internally, a trembling, a mechanical shock in which the body, without having to alter its relative position as a whole body, moves only its parts, posits its inner spatiality as temporal." Hegel, *Philosophy of Mind*, Zusatz to §401, 79.

95. Jonas, *The Phenomenon of Life*, 138.

96. Nonetheless, sound phenomena may not be able to present objective things without being coordinated with other senses, such as sight, touch, and proprioception, by means of which the temporal series of sounds gets connected with spatial location and resisting bodies.

97. So Jonas notes that "the 'identity' of the single strands in a polyphony . . . is a function of certain figural coherences . . . which . . . make the juxtaposition of plurality not a primary datum of the *now* but a feat of ongoing organization." Jonas, *The Phenomenon of Life*, 138.

98. "Transience is thus of the very essence of the *now* of hearing, and 'present' is here a mere following in the stream of onmoving process," writes Jonas in ibid., 144.

99. "The deepest reason for this basic contingency in the sense of hearing" writes Jonas, "is the fact that it is related to event and not to existence, to becoming and not to being. Thus hearing, bound to succession and not presenting a simultaneous coordinated manifold of objects, falls short of sight in respect of the freedom which it confers upon its possessor" (ibid., 139).

100. As Jonas observes, "the duration of the sound heard is just the duration of hearing it" (ibid., 137).

101. Thus Jonas notes that "the object-reference of sounds is not provided by the sounds as such, and transcends the performance of mere hearing" (ibid.).

102. Jonas points out that there is an inherent order in these object references: "The immediate object of hearing is the sounds themselves, and then these indicate something else, viz., the actions producing those sounds; and only in the third place does the experience of hearing reveal the agent as an entity whose existence is independent of the noise it makes" (ibid.). The latter two indications, will, as we shall see, depend upon more than sound perception.

103. This is further reason why a purely auditory manifold would fail to provide perceptions of anything objective, as Strawson argues in his *Individuals*, 59–86. Yet, as Jonas observes, “precisely because of this looseness of external object reference and thus of representative function, sound is eminently suited to constitute its own, immanent ‘objectivity’ of acoustic values as such—and thus, free from other-representative duty, to represent just itself” (Jonas, *The Phenomenon of Life*, 137–38), as in “pure,” nonprogrammatic music.

104. Jonas, *The Phenomenon of Life*, 149.

105. Besides the physiological relationship between smell and taste, whereby smell contributes to taste, they together comprise, as Hegel puts it, a “sphere of *process*, of decomposition and dissolution of concrete corporeity.” Hegel, *Philosophy of Mind*, Zusatz to §401, 78.

106. Macmurray makes this claim in *The Self as Agent*, 109. Later, he contradicts it by more properly observing that “tactual perception is always perception in action. If we abstract from the action, we no longer have a perceptual element, but a feeling” (ibid., 113).

107. So Jonas observes that touch “shares with hearing the successiveness of apprehension, while it shares with vision the synthesis of its data into a static presence of objects.” Jonas, *The Phenomenon of Life*, 140.

108. Accordingly, “*shape* is not an original datum of touch, but a construct which emerges additively from a serial multiplicity of single or continuously blending touch sensations, and this in conjunction only with proprioceptive motor sensations . . . the simple tactile qualities, such as soft and hard, and even more so rough and smooth, are not really an instantaneous experience but require a series of changing sensations obtained by pressure and by friction, i.e. generally speaking by movement” (ibid.).

109. Thus with touch, in contrast to hearing, the “sequence is one more of active performance than of mere incoming data” (ibid., 144), giving support to Macmurray’s claim that “tactual perception is always perception in action.” Macmurray, *The Self as Agent*, 113.

110. Consequently, Macmurray is wrong in claiming that “it is only in tactual contact that our awareness of the Other is not a knowledge of the past” (ibid., 209). Because tactual perception involves associating the series of proprioceptive and tactile sensations in the course of a dynamic interaction extending over time, memory plays a role.

111. Jonas, *The Phenomenon of Life*, 142.

112. Ibid., 142.

113. Jonas draws these comparisons in ibid., 143.

114. See ibid., 147–48.

115. As Hegel observes, by heat “the specific gravity and cohesion of bodies is altered. Hence, this alteration affects what is essential in the nature of body; . . . in being affected by heat, *solid* corporeity is for touch.” Hegel, *Philosophy of Mind*, Zusatz to §401, 80.

116. Aristotle, *De Anima*, Book 2, chapter VI, 418a15–20.

117. Berkeley writes, “I desire anyone to reflect and try whether he can, by any abstraction of thought, conceive the extension and motion of a body without all other sensible qualities. . . . In short, extension, figure, and motion, abstracted from all other qualities, are inconceivable.” See George Berkeley, *A Treatise Concerning the Principles of*

Human Knowledge, Part I, Section 10 in *Classics of Western Philosophy*, 6th ed., ed. Steven Cahn (Indianapolis: Hackett, 2002), 681.

118. The movement, shape, and size can here be restricted to two-dimensional parameters, if, as argued below, three-dimensional perception depends upon touch and intersensorial awareness.

119. Such encompassing consciousness also underlies synesthesia, a condition where an individual experiences sensations of a particular sense modality always accompanied by sensations from another, such as particular colors with certain sounds, even when no object combines both. This condition, attributed to “cross-wiring” between contiguous areas of the brain that register different sense modalities, is distinct from intersensorial perception proper insofar as the associated sensations involve some that have no objective correlate, but are peculiar to the pathological neurophysiology of the individual. Nonetheless, synesthesia can only occur insofar as consciousness is aware of both sensations at once.

120. See, for example, Aristotle, *On Memory*, 450 a10, *On Sleep*, 455 b19, *On Youth, Old Age, Life and Death, and Respiration*, 469 a12, in *The Complete Works of Aristotle*, vol. 1, ed. Jonathan Barnes (Princeton, NJ: Princeton University Press, 1984). Aristotle does, however, argue that “there cannot be a special sense-organ for the common sensibles . . . it is clearly impossible that there should be a special sense for any one of the common sensibles, e.g., movement; for, if that were so, our perception of it would be exactly parallel to our present perception of what is sweet by vision. . . . But in the case of the common sensibles there is already in us a common sensibility which enables us to perceive them non-incidentally; there is therefore no special sense required for their perception.” See Aristotle, *De Anima*, 425a14–28 in *The Complete Works of Aristotle*, vol. 1, 676.

121. Berkeley, *Works on Vision*, 7–102.

122. Berkeley accordingly argues, “Men are tempted to think that flat plane figures are immediate objects of sight, though they acknowledge solids are not. And this opinion is grounded on what is observed in painting, wherein it seems the ideas immediately imprinted on the mind are only of planes variously colored, which, by a sudden act of the judgment, are changed into solids; but with a little attention, we shall find the planes here mentioned as the immediate objects of sight are not visible but tangible planes. For, when we say that pictures are planes we mean thereby that they appear to the touch smooth and uniform.” See Berkeley, *Works on Vision*, 95–96. Berkeley further concludes (*ibid.*, 94–96) that an “unbodied spirit,” lacking a sense of touch, could not therefore comprehend plane or solid geometry.

123. In this respect, motion is crucial for depth perception, for as Jonas observes, “we should . . . not see the world arranged in depth, stretching away from us indefinitely, if we were not more than seeing creatures: if we were not creatures that also can move into space and have done so in the past.” Jonas, *the Phenomenon of Life*, 154. The continuity of motion, however, must also be perceivable and the dynamic character of motion with effort and resistance provides a key element for sensing the continuity of body position.

124. *Ibid.*, 155.

125. In this connection, Jonas asks, “How did motion itself come to be experienced as motion, if its evidence were just visual displacement? The epistemological circle is obvious. It is here where movement *qua performance* becomes crucial” (*ibid.*).

126. Ibid.

127. In Kant's precritical essay, "Of the first principle of the difference of directions in space," he points out that if God one night reversed the position of the stars, one would be unable to perceive any difference unless one could feel the difference between the left and right sides of one's own body. Cited by Jonas (ibid.).

128. Ibid., 154–55.

129. "Self-movement may indeed be called the spatial organizer in each sense-species, and the synthesizer of the several senses toward one common objectivity . . . in exploring an object of feeling alone (e.g., in darkness), it is the direction of my own voluntary movements of limb, with my body as reference-system, that furnishes the framework of dimensional coordinates into which the successive contact sensations are integrated. . . . Without this kinesthetic side of the complex process no unification of the individual local data into a coherent series, and eventually no concrescence of them into a total simultaneous form, would come about in touch" (ibid., 153–54).

130. So Jonas observes, "the 'possession' of a body . . . is indeed the primal fact of our spatiality: the body not merely as occupying a volume of space geometrically, but as always interacting with the world physically, even when at rest (e.g., by mere gravity)" (ibid., 154).

131. Macmurray accordingly observes that vision "is anticipatory perception. It enables us to anticipate contact, that is to say, the resistance of the other; and the distance at which an object is seen is a measure of the time it will take to make contact with it." Macmurray, *The Self as Agent*, 111. The same can be said of hearing.

132. Macmurray notes that "vision, in spite of its negative relation to action, functions primarily in action and as a guide to action" (ibid.).

133. "The knowledge of practical possibility is therefore primarily a knowledge of the variations of resistance to my movement in different directions" (ibid., 166).

134. See ibid., 108–09; Jonas, *The Phenomenon of Life*, 153.

135. Aristotle, *De Anima*, Book 2, chapter 2, 413b4, 658.

136. As Aristotle observes, without touch, an animal "will be unable to avoid some things and take others, and so will find it impossible to survive" (ibid., Book 3, Chapter 12, 435a17–18, 691).

137. Ibid., Book 2, Chapter 3, 414b7, 660.

138. Aristotle thus maintains that "the loss of this one sense alone must bring about the death of an animal. For . . . it is the only one which is indispensably necessary to what is an animal" (ibid., Book 3, Chapter 13, 435b4–7, 692).

139. "But is it possible to conceive a human being who never possessed a tactual sense? . . . Any question about how such a being, if he were born into the world without the capacity to feel any pressure upon him, could survive; or if he could survive, how he could ever know that he was surrounded by a world of things, reveals that the situation is unthinkable. . . . A purely visual experience would provide no ground for distinguishing in practice between imagining and perceiving. The result would be a practical solipsism." Macmurray, *The Self as Agent*, 107–08.

140. Ibid., 108.

141. As Macmurray writes, "Touch, . . . as a special sense, is the awareness of contact and therefore of the distinction between Self and Other. . . . Below this level, the awareness produced by contact is a *feeling*, and such awareness is purely motive" (ibid., 123).

142. Although Hegel provides a systematic analysis of the categories of thing and properties in his *Logic of Essence*, which precedes the *Logic of the Concept*, within which universality first emerges as a theme (see Hegel, *Science of Logic*, 481–96), he tends to discuss the mediated objects of sense perception as if such things involved universal relations, rather than determinations restricted to the categories of essence. See Hegel, *Philosophy of Mind*, para. 419–21, 160–62. Properly speaking, this could only apply to a perceiver who is also endowed with discursive rationality.

143. Taylor claims that “in a world *in principle* accessible to only one sense, there would be no way of making the distinction between what is and the distortions it may from time to time undergo in experience, i.e., between what is and how it looks. And without this distinction there is no notion of objectivity.” See Charles Taylor “The Opening Arguments of the *Phenomenology*,” in *Hegel: A Collection of Critical Essays*, ed. Alasdair MacIntyre (Notre Dame, IN: University of Notre Dame Press, 1976), 173.

144. Bergson suggests that a “parallelism of the *order* of the visual sensations with the order of the tactile sensations” can make us “obliged to suppose, over and above visual sensations, over and above tactile sensations, a certain order which is common to both, and which consequently must be independent of either,” leading “to the hypothesis of an *objective* order, independent of ourselves; that is to say, of a material world distinct from sensation.” Bergson, *Matter and Memory*, 66. Yet the obligation in question must *presuppose* that the parallelism of intersensorial sensations is objective, since otherwise, it may just as well comprise a parallelism of purely subjective modifications.

145. As Berkeley points out, although the correspondence in number between the parts of a visible figure and a tangible figure may suggest that they belong to the same thing, unless they are qualitatively related, mere quantitative congruence cannot suffice to join them together. As Berkeley writes, “It will not hence follow that any visible figure is like unto or of the same species with its corresponding tangible figure—unless it be also shown that not only the number but also the kind of the parts be the same in both.” Berkeley, *Works on Vision*, 89. Yet, as deliverances of different senses, their respective properties are qualitatively distinct, leaving their unity in question.

146. Whether things that have one sensible property must also have others can be established by the philosophy of nature, to the extent that it can conceive necessary physical features beyond the “primary” qualities of matter, and can be confirmed by empirical science.

147. As Jonas observes, “the classical concept of self-contained, inactive substance” is “but the conceptual framing of perceptual truth: ‘substance’ conceived on that model admits of external relations only and by definition excludes all self-transitiveness.” Jonas, *The Phenomenon of Life*, 32.

148. *Ibid.*, 168.

149. “This element of encounter . . . is part of the internal evidence over and above the eidetic content of perception, when latter is to be experience of real things” (*ibid.*).

150. As Jonas puts it, “there is ‘abstraction’ from the state of sensory stimulation itself in the very fact of one’s perceiving the object instead of his own organic affection. Some sort of disengagement from the causality of the encounter provides the neutral freedom for letting the ‘other’ appear for itself. (The organization of our senses assures this disengagement in advance.) See *ibid.*

151. Although the nonvisual senses involve time-series manifolds, they still perceive things that at each moment integrate some plurality of properties, even if some must be recalled from the past.

152. Describing how this applies to visual perception, Jonas writes, "The identity of the configuration as such is perceived across the whole scale of its *possible* visual transformations." Jonas, *The Phenomenon of Life*, 169.

153. Both of these limitations are evident in Locke's account of sensible substance. Precisely because Locke recognizes the simple ideas of sensuous consciousness to be immediate and therefore to lack any intrinsic connection to one another, he must regard any regularities in the perceived associations of such ideas to depend upon something lying beyond them all and beyond all sensation, namely some substance that can have no other character than being the hidden ground, the unperceived substrate that somehow wields the power to connect these ideas together, enabling them to be perceived as the properties of an abiding thing. See John Locke, *An Essay Concerning Human Understanding*, vol. 1, ed. Alexander Campbell Fraser (New York: Dover, 1959), 216, 228–29.

154. Taylor, "The Opening Arguments of the *Phenomenology*," 175.

155. Hegel provides the logic of this development in *The Science of Logic*, 490–94.

156. Hegel points out in his *Science of Logic* that the "matters" to which the "properties" of things revert have little to differentiate themselves, since they do not comprise things possessing multiple properties of their own (*ibid.*, 492–94). In perception, this logical paucity is supplemented by the possible multiplicity of modes of sensible existence and sensibility, as well as by spatio-temporal location and the intensive and extensive quantity of matters.

157. Taylor mistakenly suggests that when Hegel's *Phenomenology of Spirit* moves from sense-perception of a thing with properties to the understanding of the object as a dynamic unity, we are moving from "a one-tiered to a two-tiered concept, rather like the step from being to essence in the *Logic*." Taylor, "The Opening Arguments of the *Phenomenology*," 174. Hegel, however, treats the category of "thing and its properties" as a determination of the Logic of Essence because, like the dynamic relationships of force and law, it involves determinations that are posited by something else that is not coeval with them. In the case of a thing and its properties, the thing is the underlying substrate to which properties belong, just as force and law are the underlying dynamic basis of the appearances they determine. In *having* rather than *confronting* properties, things are not limited by properties in the way in which equiprimordial factors relate as something and other, where what something is depends upon its contrast with what it is not, namely something other, rather than upon possessing properties that inhere in it.

158. Charles Taylor questions whether natural law must involve an inner necessity, as he claims Hegel assumes in the *Phenomenology of Spirit's* observation of the shape of consciousness of Understanding. Charles Taylor, *Hegel* (Cambridge: Cambridge University Press, 1975), 147. Consciousness of law does involve awareness of an inner necessity simply because the abstract content of law is distinct from the concrete sensuous appearance of objects putatively governed by that law. Their phenomenal character comprises the outer realization of the "insensible," inward rule by which forces operate. The difference between outer expression and inward ordering is only removed when the object is a living

thing, whose various organs engage in correlative life functions immediately reproducing the active unity of the living thing.

159. Hegel logically distinguishes *existence* from *appearance* in this way, whereby *appearance* is *posited existence*, determined by law and force. See Hegel, *Science of Logic*, 499–500.

160. As Hegel puts it, force “*must express itself . . . and . . . it is still Force remaining within itself in the expression.*” Hegel, *Phenomenology of Spirit*, 81. Hence, “what was supposed to be something else soliciting it is really Force itself” (*ibid.*, 83).

161. This presupposes that the animal is endowed with at least a sense of touch, without which any distinction between sleep and waking may be indiscernible.

162. Jonas points this out in reference to our experience of our own living force, without explicitly extending this experience to nonhuman animals. See Jonas, *The Phenomenon of Life*, 23.

163. See, David Hume’s *An Inquiry Concerning Human Understanding* (New York: Bobbs-Merrill, 1955), where he writes, “the particular powers by which all natural operations are performed never appear to the senses” (p. 56.) for “there is no part of matter that does ever, by its sensible qualities, discover any power or energy, or give us ground to imagine that it could produce anything, or be followed by any other object, which we could denominate its effect” (p. 75).

164. Jonas, *The Phenomenon of Life*, 25.

165. *Ibid.*, 31. Bergson similarly observes that “my muscular sense brings me the consciousness of it. That is to say, I grasp the reality of movement when it appears to me, within me, as a change of *state* or of *quality*.” Bergson, *Matter and Memory*, 258.

166. Jonas, *The Phenomenon of Life*, 25.

167. This is another reason for questioning the plausibility of ascribing consciousness to a brain in a vat.

168. Popper and Eccles, *The Self and Its Brain*, 132.

169. Kant correctly acknowledged this by treating teleological judgment as merely regulative of understood objectivity, but he was mistaken in presuming that consciousness cannot experience its own life or that of other organisms.

170. See Kant, *The Critique of Pure Reason*, “On the schematism of the pure concepts of the understanding,” A137–47/B176–87, 271–77.

171. *Ibid.*, A144, B183/184, 275.

172. Hegel ascribes this move as internal to consciousness as understanding, intimating that it sets the stage for self-consciousness by confronting consciousness with something subjective. See Hegel, *Philosophy of Mind*, Zusatz to §418, 159.

173. This involves the mental activity specific to intelligence, which will be addressed in the sequel to this work.

174. Hegel suggests that this is achieved by consciousness of life in general. In the *Philosophy of Mind* (Zusatz to para. 423, 164–65), he explains that “since . . . the merely abstractive, intellectual consciousness does not as yet attain to a *comprehension* of the unity of the distinct determinations which is present in law . . . , this unity still remains for this consciousness something dead, something, therefore, not corresponding to the activity of the ‘I.’ In the living being, on the other hand, consciousness beholds the process itself of positing and annulling the distinct determinations. . . . For life is that inner

existence which does not remain *abstractly* inner but enters wholly into its manifestation; . . . a material existence in which the asunderness of the parts appears as overcome and the individual part is reduced to an ideal moment, to a *member* of the whole; in short, life must be grasped as self-end (*Selbstzweck*), as an end which possesses its means within itself, as a totality in which each distinct moment is alike end and means. It is, therefore, in the consciousness of this *dialectical*, this *living* unity of distinct moments that self-consciousness is kindled, the consciousness of the simple, ideal existence that is its own object and therefore differentiated within itself, in other words, the knowledge of the *truth* of natural existence, of the ‘I.’”

175. Macmurray points out “although the family dog will respond to a child’s call . . . and will reply to expressions of affection with expressions of pleasure,” there is “an absolute dividing line . . . not so much due to the absence of speech as to the inability of even the highest organism to care for us, even for a child, in the practical ways in which we must be cared for if we are to survive and mature as persons.” Macmurray, *Persons in Relation*, 84. If such care is essential to the emergence of self-consciousness, then that emergence may well depend upon to what kind of an animal consciousness relates.

Notes to Chapter 9

1. The following analysis expands upon an earlier investigation of mine first published as “Self-Consciousness and Intersubjectivity,” *The Review of Metaphysics* 59, no. 4 (June 2006): 757–79.

2. See Descartes, *Meditations on First Philosophy*, 3rd ed., trans. Donald A. Cress (Indianapolis: Hackett, 1993), Meditation 1, 13–17.

3. Significantly, Kant construes this self-relation as involving *not* awareness of consciousness as an object of experience, but only the *thought* of the “I,” a thought which must always be thinkable, rather than actually thought, in conjunction with awareness of any object. This thought, moreover, is an entirely empty representation of a self lacking any individuating content. Why this is so will become clear in the following. See also P. F. Strawson, *Individuals: An Essay in Descriptive Metaphysics* (London: Methuen, 1979), 82.

4. Immanuel Kant, *Critique of Pure Reason*, trans. and ed. Paul Guyer and Allen W. Wood (Cambridge: Cambridge University Press, 1998), B274–79, 326–29.

5. See Strawson, *Individuals*, chapter 2, 64–86.

6. See Aristotle, *De Anima*, Book 3, chapter 12, 434b1–22, in *The Complete Works of Aristotle*, vol. 1, ed. by Jonathan Barnes (Princeton, NJ: Princeton University Press, 1984), 690–91. The irreducibility of spatial perception, as a precondition of the unity of consciousness, supports Aristotle’s claim. Visual perception, for example, cannot provide spatial perception without being coordinated with touch, which first allows differences of light and dark and color to convey spatial relations.

7. Kant, *Critique of Pure Reason*, A189–218, B232–65, 304–21.

8. Kant’s psychological determinism precludes this possibility so far as observable behavior is concerned.

9. Strawson, *Individuals*, 98, 101.
10. See M. Merleau-Ponty, *Phenomenology of Perception*, trans. Colin Smith (Routledge: London, 1998) and Strawson, *Individuals*.
11. Popper suggests that the possibility of brain and “self” transplants calls into question Strawson’s claim that persons are *logically* primitive, since brain transplants would sever personal identity from a person’s body, unless the identity of the body is tied to the identity of the brain. See Karl Popper and John C. Eccles, *The Self and Its Brain: An Argument for Interactionism*. London: Routledge, 1998), 117–18. Yet since the connection to the brain still ties consciousness to an identifiable individual embodiment, “pure consciousness” remains a derivative abstraction.
12. In section 16 of the B edition Transcendental Deduction, Kant points out that because the representation “I think” must accompany all other representations, it cannot itself be accompanied by any further representation. Hence, nothing manifold can be given in the “I think,” which must be a purely simple representation, devoid of individuating content. See Kant, *Critique of Pure Reason*, B132, 246, and B135, 248.
13. Strawson makes this point. See *Individuals*, 82.
14. Popper points out their difference in Popper and Eccles, *The Self and Its Brain*, 106, 109.
15. As Popper writes, “Memory is obviously important for self-awareness: those states of which I have lost my memory *completely* can hardly be said to be states of myself” (ibid., 103).
16. Neither perceptions nor their associations by resemblance, contiguity, and causality can secure self-consciousness since they do not alone present the self that has them, leaving questionable whether they belong to the same awareness. As Hume observes, “There is no absurdity in removing any particular perception from the mind.” David Hume, *A Treatise of Human Nature*, ed. L. A. Selby-Bigge (Oxford: Oxford University Press, 1965), 207.
17. Popper and Eccles, *The Self and Its Brain*, 116.
18. Karl Popper, *The Open Universe: An Argument for Indeterminism*, from the *Postscript to the Logic of Scientific Discovery* (Totowa, NJ: Rowman & Littlefield, 1982), 153, 159.
19. Ibid., 158.
20. In this connection, J. Melvin Woody observes that “The ability of chimpanzees to recognize their own images certainly knocks the pins out from under any presumption that human beings have a monopoly on self-consciousness,” and that, more generally, “animals must surely have some sense or sentiment of self. An animal totally oblivious of itself could scarcely experience fear or take steps to protect or preserve itself. Studies of animal social organization clearly show that an animal may even be aware of its own social status, its rank in a ‘pecking order.’” See J. Melvin Woody, *Freedom’s Embrace* (University Park: The Pennsylvania State University Press, 1998), 276.
21. Strawson, *Individuals*, 99.
22. G. W. F. Hegel, *Phenomenology of Spirit*, trans. A.V. Miller (Oxford: Oxford University Press, 1977), 104–19.
23. See Karl Marx, *The Economic and Philosophic Manuscripts of 1844*, trans. Dirk J. Struik (New York: International Publishers, 1964).

24. See Alexandre Kojève, *Introduction à la lecture de Hegel* (Paris: Éditions Gallimard, 1947).

25. See G. W. F. Hegel, *Philosophy of Mind*, being *Part Three of the Encyclopaedia of the Philosophical Sciences* (1830), trans. William Wallace together with the *Zusätze in Boumann's Text* (1845) trans. A. V. Miller (Oxford: Oxford University Press, 1977), para. 426–29, pp. 167–70.

26. In the additions to para. 418 (p. 159) and 423 (pp. 164–65) of his *Philosophy of Mind*, Hegel suggests that self-consciousness becomes kindled when consciousness observes a living organism, whose self-sustaining process confronts consciousness with something subjective. Consciousness cannot thereby become objective to itself, even if life has a self-ordering character akin to the self of consciousness. The awareness of life still remains distinct from the life it observes. The same can be said of consciousness of law. Hegel suggests, in the addition to para. 422 (p. 163) of the *Philosophy of Mind*, that observing law in nature confronts consciousness with the same inner unity of distinct determinations characterizing its own ego. But does consciousness thereby become objective to itself and turn into self-consciousness, as Hegel intimates (albeit with the qualification that the transformation of consciousness is only *implicit*) in para. 423 (p. 164)? Law may be internally differentiated like the ego, but law does not oppose itself to its determinations in the way in which consciousness disengages itself from its own mental content while relating to it as something other, objective. Hence, law is not consciousness of an object, nor is consciousness of law consciousness of consciousness.

27. Hegel, *Philosophy of Mind*, addition to para. 422, 163.

28. *Ibid.*, para. 423, 164.

29. *Ibid.*, additions to para. 418, 159 and para. 423, 164–65.

30. Nonetheless, consciousness of another living animal mind will prove to be a necessary component of cognitive desire, comprising the first durable form of self-consciousness.

31. As Hans Jonas observes, “To experience the distantly perceived *as* a goal and to keep its goal quality alive, so as to carry the motion over the necessary span of effort and time, desire is required. Fulfillment not yet at hand is the essential condition of desire, and deferred fulfillment is what desire in turn makes possible.” See Hans Jonas, *The Phenomenon of Life: Toward a Philosophical Biology* (Evanston, IL: Northwestern University Press, 2001), 101.

32. The latter is what Kant referred to as the “maxim” of action.

33. See Descartes, *Meditations on First Philosophy*, Meditation 1, Meditation 2, 14, 22.

34. G. E. Moore, *Philosophical Papers* (London: George Allen and Unwin, 1959), 146.

35. See Hegel, *Philosophy of Mind*, para. 425, 165.

36. For this reason, Hegel describes consciousness of desire as abstract self-consciousness. See *ibid.*

37. As Hegel observes, self-consciousness as desire is thereby the contradiction of itself as self-consciousness and as consciousness. As much as desire relates to the object as null, it still confronts it as another. See *ibid.*

38. See *ibid.*, addition to para. 428, 169.

39. As Hegel observes, whereas self-consciousness, in having consciousness for its object, sets itself over against it, consciousness is still also retained as a moment in self-consciousness itself. See *ibid.*, addition to para. 417, 158.

40. For this reason, Popper is correct in presenting knowledge of one's body as something prior to the attainment of self-consciousness. He does this in his "conjectural scheme of development: first, the category of persons; then the distinction between persons and things; then the discovery of one's own body; the learning that it is one's own; and only then the awakening to the fact of being a self." Popper and Eccles, *The Self and Its Brain*, 111n1.

41. Daniel C. Dennett, *Kinds of Minds: Toward an Understanding of Consciousness* (New York: Basic Books, 1996), 123–24.

42. *Ibid.*, 121.

43. Dennett ignores this, suggesting, following Nicolas Humphrey, that behaving in regard to the awareness of another agent automatically makes oneself sensitive to one's own consciousness, "either because, as Humphrey suggested, one uses one's self-consciousness as a source of hypotheses about other-consciousness, or because when one gets into the habit of adopting the intentional stance toward others, one notices that one can usefully subject oneself to the same treatment. Or for some combination of these reasons, the habit of adopting the intentional stance could spread to cover both other-interpretation and self-interpretation." Dennett, *Kinds of Minds*, 120. The first "reason" undermines itself as a reason by, of course, presupposing self-consciousness. More generally, the emergence of an abiding self-consciousness lies not in consciousness relating to itself as it relates to another mind, but in consciousness finding itself self-related in relating to an other.

44. As Hegel puts it, immediate self-consciousness has only the "I" for its object, not yet the "I=I." See Hegel, *Philosophy of Mind*, addition to para. 424, 165.

45. The discrepancy between self-consciousness and consciousness remains present in two respects. On the one hand, self-consciousness confronts consciousness as something other to it. On the other hand, self-consciousness is thereby conscious, and not self-conscious, in having just consciousness as its other. As Hegel points out, "Self-consciousness has consciousness for its object, hence sets itself over against it. But, at the same time, consciousness is also retained as a *moment* in self-consciousness itself. Self-consciousness progresses, therefore, to the stage where, by the repulsion of itself from itself, it confronts itself with another self-consciousness and in this gives itself an object with which it is identical and yet which is at the same time self-subsistent" (*ibid.*, Zusatz to §417, 158).

46. See *ibid.*, para. 432, 172; and addition to para. 432, 172.

47. See *ibid.*, para. 430–35, 170–76.

48. Errol Harris, *An Interpretation of the Logic of Hegel* (Lanham, MD: University Press of America, 1983), 113.

49. Heidegger writes in this connection, "It might be said that this relationship is already constitutive for one's own Dasein, which in its own right, has an understanding of Being, and which thus relates itself towards Dasein. The relationship-of-Being which one has towards Others would then become a Projection of one's own

Being-towards-onself ‘into something else.’ The Other would be a duplicate of the Self. But while these deliberations seem obvious enough, it is easy to see that they have little ground to stand on. The presupposition which this argument demands, that Dasein’s Being towards itself is Being towards an Other—fails to hold.” See Martin Heidegger, *Being and Time*, trans. John Macquarrie and Edward Robinson (New York: Harper and Row, 1962), 162.

50. Harris, *An Interpretation of the Logic of Hegel*, 113.

51. Jean-Paul Sartre, *Being and Nothingness*, trans. Hazel E. Barnes (New York: Washington Square Press, 1956), 490.

52. See Hegel, *Philosophy of Mind*, para. 436–37, pp. 176–78.

53. They would be like newborn infants who could never make the transition from psyche to consciousness without suddenly and inexplicably gaining linguistic intelligence.

54. As Woody points out, because Sartre associates negativity and freedom with self-consciousness, while claiming that consciousness depends on self-consciousness, he removes any inherent connection between nature and mind, leaving the evolution of the human mind an inscrutable mystery. See Woody, *Freedom’s Embrace*, 250.

55. Conscious subjects may, however, have difficulty recognizing the desire of others, as is perhaps exhibited in certain cases of autism, where individuals seem unable to distinguish minds from things and therefore fail to develop linguistic intelligence. Ramachandran suggests that this inability is neurologically rooted in “a deficient mirror-neuron system,” preventing autistic individuals from being able to model internally the behavior of others. See V. S. Ramachandran, *A Brief Tour of Human Consciousness* (New York: Pi Press, 2004), 106.

56. In his *Vorlesungen über die Logik: Berlin 1831 Nachgeschreiben von Karl Hegel*, ed. Udo Rameil and Hans-Christian Lucas (Hamburg: Felix Meiner Verlag, 2001), 174, Hegel observes that love is the concept as feeling, where each party feels at one with its counterpart while equally acknowledging its independence. To the extent that this reciprocity of feeling applies to recognitive desire, it suggests that the conceptual unity it exhibits can be felt without having to be thought.

57. “Consciousness of self begins to develop through the medium of other persons: just as we learn to see ourselves in a mirror, so the child becomes conscious of himself by sensing his reflection in the mirror of other people’s consciousness of himself. . . . To be a self, much has to be learned; especially a sense of time, with oneself extending into the past . . . and into the future” which involves “at least . . . an expectation.” Popper and Eccles, *The Self and Its Brain*, 110.

58. John Macmurray, *Persons in Relation* (Amherst, NY: Humanity Books, 1999), 47.

59. *Ibid.*, 47–48.

60. As Macmurray observes, the infant’s “sucking reflex is his sole contribution to his own nutrition” (*ibid.*, 50).

61. As Macmurray puts it, the baby “is, in fact, ‘adapted,’ to speak paradoxically, to being unadapted, ‘adapted’ to a complete dependence upon an adult human being. He is made to be cared for” (*ibid.*, 48).

62. “The baby need do nothing about his organic needs, and therefore need not even be aware of them discriminatingly” (*ibid.*, 62).

63. *Ibid.*, 61.

64. Accordingly, as Popper suggests, “long before we attain consciousness and knowledge of ourselves, we have, normally, to become aware of other persons, usually our parents.” Popper and Eccles, *The Self and Its Brain*, 109.

65. Joel Whitebook argues, contra Lacanians who would derive the self entirely from mirroring interaction, that “the claim that the self is *in toto* a product of mirroring—whether the mirroring is conceived of visually, aurally or linguistically—precludes the existence of a pre-reflective self. But logically, for mirroring to take place, there must be a pre-reflective self-precursor that can pick out an item in the mirroring phenomenon and recognize it as a reflection of itself.” Joel Whitebook, “First Nature and Second Nature in Hegel and Psychoanalysis,” *Constellations* 15, no. 3 (2008): 385.

66. As Macmurray observes, the infant’s discrimination of the other into a number of different persons is first manifest as “a discrimination in behavior in relation to the Other. The ability to distinguish different members of the family to which the child belongs is established very early and manifests itself in differences of behavior in relation with each.” Macmurray, *Persons in Relation*, 78. Here jealousy can first become evident in the child’s refusal to share “care and affection with others” in what “formally . . . is a regressive effort to restore the unity of the Other in its original undifferentiated form” (*ibid.*, 79).

67. *Ibid.*, 87.

68. Whitebook accordingly writes, “because feelings or affects, rather than meanings, are what infants and mothers share in these early interactions, ‘communicate’ about, we ought to follow Stern and refer to them as ‘interactivity.’” Whitebook, “First Nature and Second Nature in Hegel and Psychoanalysis,” 285. The reference to “mothers” should properly signify “caregivers,” whether mothers, fathers, or anyone else.

69. Macmurray, *Persons in Relation*, 49–50.

70. “The positive and negative poles of the infant’s motivation are the germinal forms of love and fear respectively. The sense of discomfort expressed in the call for the mother is implicitly the fear of isolation. . . . The sense of comfort communicated by his expression of delight in being cared for is the germinal form of love.” Macmurray, *Persons in Relation*, 62.

71. Macmurray maintains that this situation renders the baby “not an animal organism, but a person, . . . a rational being” since “his life, and even his bodily survival, depends upon intentional activity, and therefore upon knowledge” (*ibid.*, 51). Yet all this could still apply to nondiscursive animals nurturing young who signal their need. Caring can be intentional without involving thinking and language. Not all purposes require concepts for their representation.

72. As Macmurray observes, the child’s “does not merely learn, as animals do, by instinct helped out by trial and error; he is *taught*. His acquirement of skills is an education. It is a cooperative process which requires from the start the foresight, judgment and action of a mature person” (*ibid.*, 59).

73. *Ibid.*

74. *Ibid.*, 88–89.

75. Accordingly, writes Macmurray, “human experience is, in principle, shared experience; human life, even in its most individual elements is a common life; and human behavior carries always, in its inherent structure, a reference to the personal Other” (*ibid.*, 61).

76. As Macmurray puts it, "This original reference to the other is . . . the germ of rationality. For the character that distinguishes rational from non-rational experience, in all the expressions of reason, is its reference to the Other-than-myself. What we call 'objectivity' is one expression of this" (ibid.).

77. "If the *terminus a quo* of the personal life is a helpless total dependence on the Other, the *terminus ad quem* is not independence, but a mutual interdependence of equals" (ibid., 66).

78. If it did not, and an infant is abandoned by *all* caregivers, the prospects of survival are so dim as to make this option moot.

79. J. Melvin Woody observes that "man's image of himself is a *symbolic* representation rather than a mere *copy*. The self-representative power of symbolism conjoins with its power to represent *possibilities* so as to produce an image or concept of an *ideal* or *possible* self. The actual self may or may not coincide with the ideal, possible self, which therefore functions as both a *goal* to be realized and as a *norm* that regulates feeling and action." J. Melvin Woody, *Freedom's Embrace* (University Park: The Pennsylvania State University Press, 1998), 278. The decisive divide is not symbolic representation generally, but semiotic representation, where the sign's only relation to what it is about is determined by mind, allowing for image-free thinking and awareness of universal norms. This is something more than the symbolic dance of bees.

80. "Man is not only able to choose among alternative particular *actions*, as animals can, but even able to choose among alternative possible *selves*. . . . An animal may *in fact* determine itself through the series of its particular choices and acts. But for lack, of any clear image or conception of itself, it cannot *choose itself*. That is, it cannot choose among alternative ideal or possible selves. . . . Because man is able to decide about himself at this level, he is a free, or *self-determining*, being in a sense in which other animals are not." Woody, *Freedom's Embrace*, 279.

81. When Popper maintains that we obtain self-knowledge "not by self-observation, . . . but by becoming selves and developing theories about ourselves," the self-knowledge in question is properly that universal self-awareness of the Socratic injunction. See Popper and Eccles, *The Self and Its Brain*, 109.

Notes to Chapter 10

1. See G. W. F. Hegel, *Philosophy of Mind*, being *Part Three of the Encyclopaedia of the Philosophical Sciences 1830*, trans. William Wallace together with the *Zusätze in Boumann's Text 1845*, trans. A. V. Miller (Oxford: Oxford University Press, 1977), addition to para. 437, 177.

2. In the form of linguistic intelligence, reason *thinks* objectively, thereby *conceiving* what holds true for all knowers.

3. Hegel, *Philosophy of Mind*, §437, 178.

4. This is why Hegel can claim that only when true content becomes an object for mind can intelligence become reason in its concrete significance. See *ibid.*

5. For an account of the logical differentiation of universals, judgments, and syllogisms, see Richard Dien Winfield, *From Concept to Objectivity: Thinking through Hegel's Subjective Logic* (Aldershot, UK: Ashgate, 2006), 89–130.

6. As Berman observes, “Since reason’s idealism assumes its identity with all reality, and talk of things is of what is the negative of itself, i.e., of mind-independent givens, there’s no point to seeking self-knowledge in things. But this is precisely what reason, as observing nature, has been doing.” See Robert Berman, “Reason, Idealism, and the Category: Kantian Language in Hegel’s *Phenomenology of Spirit*” (forthcoming), 12. Berman further maintains that “observing nature is such a non-starter; for, observing is not simply sensing and perceiving, but essentially involves conceptualization, yet conceptualized objects are not indifferent to their cognitive relation, as is the case with natural givens, but instead are functions of reason” (ibid.). This may apply to Hegel’s account of the observation of nature in the *Phenomenology of Spirit*, but consciousness as reason does not yet conceptualize when it observes nature, as theoretical intelligence will do. Nonetheless, observation does operate with the assurance that the contents of consciousness conform to objectivity, which allows it to achieve “correctness.”

7. See Hegel, *Phenomenology of Spirit*, 185ff.

8. Berman, “Reason, Idealism, and the Category,” 13.

9. In the *Phenomenology of Spirit*, Hegel phenomenologically observes another avenue of development, where consciousness forsakes observation to actualize through its own activity the self-consciousness that it claims to know. As Berman observes, “Becoming active, rather than merely observing, reason’s gambit is to provide warrant for its claim to self-knowledge by bringing about, through its own doing, the very self it can consequently justifiably claim to know” (ibid., 14). As Berman notes, this effort remains problematic. If reason as consciousness constitutes other congruent subjects in a recognition process in which it participates, these must have some given determinacy differentiating them as distinct members of the same kind, reintroducing the same alien element that “blocks their reciprocal identification with one another” (ibid.). Alternately, if reason seeks to overcome this natural differentiation by entering into a recognition process whose participants have distinct roles by accepting rules of membership, these rules retain a givenness of their own that presents an analogous incongruence. If consciousness then produces its own order, that order confronts the other participants as something given to them. In each case, there remains a discrepancy between the reality in which conscious attempts to actualize itself as reason and some external given. This applies to all efforts at self-expression, as well, since whatever results has a determinate givenness that confronts the self with another limited thing, incongruent with the self whose self-expression it is as well as with the self-expressions of others (see ibid., 18).

10. Intelligence will be systematically addressed by my forthcoming sequel to *The Living Mind*, tentatively entitled, *The Rational Mind: From Theoretical to Practical Intelligence*.

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