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Maxine Sheets-Johnstone

The Primacy of Movement

THE PRIMACY OF MOVEMENT

MAXINE SHEETS-JOHNSTONE

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11. The difference between traditional Western medicine and traditional Asian medicine is a classic example. For a discussion of functions with and without structures, see Sheets-Johnstone 1992a.
12. James Lennox (personal communication) notes that the more traditional translation of the Greek would be rendered 'actuality' rather than 'activity' (the common J. A. Smith translation notwithstanding), a fact that underscores precisely the particular point of moment here, namely, that quality is an actuality with respect to both object of sense and organ of sense.
13. There are of course overlaps, whether one labels them metaphorical or not, e.g., the *shape* of a musical phrase, the *accents* of color in a painting, and so on.
14. An apple's falling from a tree is a kinetic fact of life not only in the sense that an unpicked apple will fall from a tree, but precisely in the sense that *circonstances* are part of life. Living things do not live in a vacuum but are quintessentially influenced by their "environment" — i.e., by the very nature of the world in general, and their own surrounding world in particular.
15. See, for example, the classic art text by Helen Gardner, *Art Through the Ages* (1948: 2): "'Form' has many meanings. Here — in fact all through this book — it is used in its widest sense: that of a total *organic* structure." See also noted philosopher of art Susanne K. Langer's *Problems of Art* (1957: 44): "Another metaphor of the studio [in addition to "life," "vitality," "livingness,"], borrowed from the biological realm, is the familiar statement that every art work must be organic. Most artists will not even agree with a literal-minded critic that this is a metaphor."
16. I introduced the concept of existential fit (1986a) originally in terms of the quintessential coherency of 'lived' and 'physical' bodies — not, as here, of the quintessential coherency of creature and world.
17. For related, paleoanthropologically-based studies showing how the body is a semantic template, see Sheets-Johnstone 1990; see also Sheets-Johnstone 1994: Chapter 2, "An Evolutionary Genealogy."
18. At the beginning of this same essay, "Man and the Sea Shell" (1964b: 5), Valèry opines that "[I]t was child's play for what we call 'living nature' to obtain the relation between form and matter that we [artists or humans] take so much pains to attempt or to make some show of achieving."

CHAPTER 3

The Primacy of Movement*

> *Animation* designates the way in which mind acquires a locality in the spatial world, its spatialization, as it were, and together with its corporal support, acquires *reality*. Edmund Husserl (1977: 101)
>
> It is the special quality of ... animation which accounts for the fact that what is Bodily and ultimately *everything* Bodily from no matter what point of view can assume psychic significance, therefore even where at the outset it is not phenomenally the bearer of a soul. Edmund Husserl (1989: 102)

1. Introduction

Two prefatory comments necessarily begin this chapter, each of them acknowledging the thoughtful writings of others that are in different ways topical to the present endeavor. First, philosopher Algis Mickunas wrote a brief article titled "The Primacy of Movement" that was published in 1974. Although not offering a phenomenological analysis of movement, Mickunas affirmed (9,8) that "kinaesthetic awareness constitutes our basic 'perceptual organ' of space and time" and that kinesthetic consciousness itself is the basis of all perception: it is "a common denominator ... a basic process of knowing, which sub-tends all bodily actions, and synthesizes them." My own research and phenomenological reflections on the primacy of movement were not taken up in conjunction with Mickunas's article (nor did I realize my appropriation of *his* title until after the fact). There is all the same a concurrence of thought about "the primacy of movement."

Second, although perhaps inevitably calling to mind philosopher Maurice Merleau-Ponty's essay, "The Primacy of Perception" (1964b), the title of this chapter does not signal a declaration of war. In fact, there is no question of a

contest of any sort between movement and perception, and this for two reasons: creaturely movement is the very condition of all forms of creaturely perception; and creaturely movement, being itself a creature-perceived phenomenon, is in and of itself a source of knowledge. Indeed, as this chapter will attempt to show on the basis of a phenomenology of self-movement, animation is the originating ground of knowledge. Not only is our own perception of the world everywhere and always animated, but our movement is everywhere and always kinesthetically informed. The foundational significance of movement should in consequence be doubly apparent to anyone concerned to investigate the nature of animate life.

Because this significance has been largely ignored in contemporary Western science and philosophy, because perception — most especially visual perception — language, information-processing, computational modelling, and other such topics are at the focal point of contemporary attention, the primacy of movement has in fact gone unrecognized and unexamined. The purpose of this chapter is to correct the omission in the most basic possible way, by going back to actual experience, to the things themselves — or more precisely, to us ourselves — thereby showing first how movement is the generative source of our primal sense of aliveness and of our primal capacity for sense-making, and second how a descriptive account of the phenomenon of self-movement elucidates cardinal epistemological structures inherent in kinesthetic consciousness.[1] To bring these kinetic and kinesthetic understandings and structures historically and resonantly to the fore, I would like to begin by framing them in the context of philosopher Edmund Husserl's notion of animate organism. My purpose is not only to show Husserl's consistent concern with, and insights into, animation, but to call attention to his non-species-specific sense of animation. By his very use of the term "animate organism," Husserl was clearly rendering an account of something not exclusive to humans, that is, something broader and more fundamental than human animate organism. Indeed, as will be apparent, he regarded nonhuman creatures as animate organisms along with humans and included them in an account of reality and nature,[2] never referring to them, for example, in a demeaning way as "brutes" in the manner of Descartes and other philosophers, even present-day ones (e.g., Carruthers 1989). This non-exclusive conception is not the result of a love of animals, or of a particular familial or cultural upbringing. It is the result of regarding the world, and in particular, nature, within the phenomenological attitude; that is, when one brackets one's everyday, natural attitude toward the world, which attitude of course includes a certain attitude toward nonhuman animals, and in turn perceives nonhuman animals in a neutral

way without the values — whether social, religious, or even scientific-medical — that one ordinarily brings to one's perception of them, then one of course observes them as *animate organisms*, i.e., live things, beings that move. This is the way they appear; this is the original way in which we experience them. Indeed, this is the way infants and very young children experience them prior to ingesting any particular familial or cultural attitude; they experience them simply as things that move, as *animate forms*. It is noteworthy to point out that perceiving nonhuman animals in the phenomenological attitude is conceptually concordant with an evolutionary viewpoint. In each case, one sees animate organisms *as living, moving things that by their very animate nature are continuous in kind, there being no fundamental break between nonhumans and humans*. Accordingly, although in the phenomenological study that follows, the focus will be on human animation — the necessary starting point of a phenomenology — the most basic findings pertain *mutatis mutandis* to nonhuman animals who, like humans, are animate organisms that move themselves. A notable stipulation applies: having formally distinctive bodies in the same way that earlier hominids — for example, Neandertals, *Homo habilis*, and *Australopithecus afarensis* — had bodies formally distinct from later hominid bodies (in particular, present-day human ones), each species of nonhuman animate organism must ultimately be fleshed out in its own distinctive terms as well. In other words, while an understanding of pan-animate aspects of animate life are required, so also are understandings of animate organisms in their uniqueness. This dual understanding recalls the challenge of knowing Neandertals "in their own terms." What the latter knowing requires is something philosopher Eugen Fink in another but quite pertinent context termed a "constructive phenomenology" (Fink 1995). This dual understanding is implicit in what follows: a fleshing out of the phenomenological distinctiveness of the animate organism that is human against the background of what is phenomenologically pan-animate.

2. Animate organism

Husserl uses the phrase "animate organism" not only many times over but with a progressively greater and greater range of meaning in referring to living beings. In *Ideas I*, for example, after saying, "let us imagine that ... the whole of Nature ... is 'annihilated'" (i.e, that our experiences of the world do not add up harmoniously and are in fact totally refractory to harmonization), he goes on to

remark that "Then there would be no more animate organisms and therefore no more human beings. I should no longer exist as a human being: and, a fortiori, no fellow human beings would exist for me" (Husserl 1983: 127). Clearly, Husserl initially ties the phenomenon 'animate organism' to Nature as a coherent whole. In *Ideas II*, he states that the sensuous and the psychic "are given as *belonging* to the [man or animal] Body in question, and it is precisely because of them that it is called Body or organism, i.e., an *'organ' for a soul* or for a spirit" (Husserl 1989: 35–36). Of such bodies, he writes, for example, "I see a playing cat and I regard it now as something of nature, just as is done in zoology. I see it as a physical organism but also as a sensing and animated Body, i.e., I see it precisely as a cat" (Husserl 1989: 185). Here, Husserl clearly ties the phenomenon 'animate organism' not only to living nature, but to living creatures in the full sense of their livingness, i.e., of their carrying on activities in the world, of their being dynamically engaged as in playing, and the like. In *Ideas III*, he writes of animate organism from the very beginning, focusing in particular on the way in which we perceive an animate organism and on what he terms the science of "somatology": "We perceive the animate organism," he says, "but along with it also the things that are perceived 'by means of' the animate organism in the modes of their appearance in each case, and along with this we are also conscious of ourselves as human beings and as Egos that perceive such things by means of the animate organism." In short and in sum, 'animate organism' refers in more and more refined ways to living beings whose animateness is the foundation of their perceptual world, including the perceptual world of their own bodies. In implicitly calling attention first and foremost to creaturely movement, the term 'animate organism' underscores the originary significance of movement to creaturely life. What I would like to specify and examine in this Husserlian context are epistemological dimensions of this originariness.[3]

To begin with, Husserl makes the point (as does Ludwig Landgrebe more extensively in later commentaries) that "Originally, the 'I move', 'I do', precedes the 'I can do'" (Husserl 1989: 273; Landgrebe 1977). In *The Roots of Thinking*, I elaborated on this precedence noting that "the awareness of corporeal powers [the awareness of "I cans"] does not (and could not) arise *ex nihilo*. It arises from [everyday] tactile-kinesthetic activity: chewing, reaching, grasping, kicking, etc. The awareness of corporeal powers is thus not the result of reflective musings, whether with or without language … [and hence is] not a matter of wondering, What can I do? On the contrary, the sense of corporeal powers is the result either of moving or of already having moved." I gave as example the

tactile-kinesthetic act of chewing: in that act, a creature "catches itself in the act of *grinding something to pieces*" (Sheets-Johnstone 1990: 29). In such acts, I said, corporeal powers give rise to corporeal concepts, fundamental human concepts such as grinding, sharpness, hardness, and so on.

Now if we take seriously that the (experience) "I move" precedes the (conceptual realization) "I can do," and if we take with equal seriousness the fact that specific perceptual awarenesses of ourselves arising in everyday tactile-kinesthetic acts of doing something are the touchstone and bedrock of our discovery of "I cans" and in turn of corporeal concepts, then it is clear that movement is absolutely foundational not only to perceptual realizations of ourselves as doing or accomplishing certain things or making certain things happen — such as "grinding something to pieces" — and to correlative cognitive realizations of ourselves as capable of just such acts or activities, but to perceptual-cognitive realizations of ourselves as alive, i.e, as living creatures, animate organisms, or animate forms. *Aliveness* is thus a concept as grounded in movement as the concept *"I can."*[4] Indeed, we intuitively grasp the coincidence of aliveness and animation from the very beginning. With no prior tutoring whatsoever, we take what is living to be that which moves itself and to apprehend what is not moving and has never moved to be precisely inanimate. Experimental studies and observations of infants readily document this intuitive knowledge.[5] They document as well our fascination with movement. What moves straightaway captures our attention; it is consistently at the focal point over what is not moving.[6] This focal tethering to movement is no less first-nature to other creatures than it is to ourselves. We are all of us attuned to the animate over the inanimate; we are all alive to movement from the start. Indeed, animation is at the core of every creature's engagement with the world because it is in and through movement that the life of every creature — to borrow Husserl's phrase in the first epigraph — "acquires reality."

Given the fact that we intuitively equate aliveness with movement, it is difficult to explain why philosophers would overlook the primacy of movement in their renditions of what it is to be human, taking instead a textual model which reduces movement to mere visual and/or manual gestures coincident with reading and writing;[7] a computer model which reduces movement to mere "output," the necessary but comparatively dull aftermath of a vastly more interesting and prestigious "input"; an objective model which either typically disregards movement by considering only objects in motion and, in effect, ignores self-movement, or typically instrumentalizes movement by de-cognizing

it, making it no more than a means, a necessary but purely serviceable accouterment of perception (or knowledge); or, finally, taking no model at all, simply trivializes it. Most importantly and pointedly in terms of experience — that is, given that we humans all begin life by wiggling, stretching, opening our mouths, swallowing, kicking, crying, and so on — it is odd that philosophers would overlook the *sui generis* character of movement and fail to explore its significance. In the beginning, after all, we do not *try* to move, *think* about movement possibilities, or put ourselves to *the task* of moving. We come straightaway moving into the world; we are precisely not *stillborn*. In this respect, primal movement is like primal sensibility: "it is simply there," Husserl says (Husserl 1989: 346). Moreover in the beginning, we are not surprised by our movements, disappointed by them, or wish that they were different.[8] In the beginning, we are simply infused with movement — not merely with a *propensity* to move, but with the real thing. This primal animateness, this original kinetic spontaneity that infuses our being and defines our aliveness, is our point of departure for living in the world and making sense of it. It is the epistemological foundation of our learning to move ourselves with respect to objects, and thus the foundation of a developing repertoire of "I cans" with respect to both the natural and artifactual array of objects that happen to surround us as individuals in our particular worlds. It is in effect the foundation of our sense of ourselves as agents within a surrounding world. But it is even more basically the epistemological foundation of our sense of who and what we are. *We literally discover ourselves in movement.* We grow kinetically into our bodies. In particular, we grow into those distinctive ways of moving that come with our being the bodies we are.[9] In our spontaneity of movement, we discover arms that extend, spines that bend, knees that flex, mouths that shut, and so on. We make sense of ourselves in the course of moving. We discover ourselves as animate organisms. These kinetic-kinesthetic self-discoveries constitute their own specific repertoire of "I cans"; that is, quite apart from our "I cans" relative to a world of objects, we discover a realm of sheer kinetic "I cans": I can stretch, I can twist, I can reach, I can turn over, and so on. This realm is in truth an open-ended realm of possibilities. That it is so means that our individual repertoires are ultimately a measure of how far we grow into the bodies we are, a measure of both the extent to which we give ourselves over to the spontaneity of movement and the extent to which we explore the kinetic dimensions of our animate nature.

In discovering ourselves in movement and in turn expanding our kinetic repertoire of "I cans," we embark on a lifelong journey of sense-making. Our

capacity to make sense of ourselves, to grow kinetically into the bodies we are, is in other words the beginning of cognition. In making sense of the dynamic interplay of forces and configurations inherent in our on-going spontaneity of movement, we arrive at corporeal concepts. On the basis of these concepts, we forge fundamental understandings both of ourselves and of the world. We discover opening and closing in the opening and closing of our eyes, mouths, and hands; we discover that certain things go together such as a certain constellation of buccal movements and certain feelings of warmth — as in the act of nursing; we discover a differential heaviness in lifting our head and lifting our arm and a differential over-all bodily tension in the two movements as well. In making kinetic sense of ourselves, we progressively attain complex conceptual understandings having to do with *containment*, with *consequential relationships*, with *weight*, with *effort*, and with myriad other bodily-anchored happenings and phenomena that in turn anchor our sense of the world and *its* happenings and phenomena. In effect, our first cognitive steps are taken by way of our own movement. With these steps we begin to discover the nature of our being in the double sense of finding a coherency of experiences and of articulating a particular form of life. Correlatively, with these cognitive steps we begin to discover the nature of the world in the double sense of finding a coherency of experiences — "a world progressing harmoniously" (Husserl 1989: 78) — and a particular constellation of objects and events that are not only coincident with our natural surrounds but peculiar to our individual and cultural form of life.

Insofar as our primal animateness is the bedrock of just such kinetically- and kinesthetically-rooted conceptual understandings, our primal animateness is, to borrow (and singularize) a phrase from Husserl, "the mother of all cognition." A remarkable analogy in fact exists between the originariness of movement and the originariness sought by phenomenology, the context in which Husserl actually used the phrase. The analogy is adumbrated in Husserl's remark that "Phenomenology in our sense is the science of 'origins', of the 'mothers' of all cognition; and it is the maternal-ground of all philosophical method: to this ground and to the work in it, everything leads back" (Husserl 1980: 69).

Everything cognitive leads back equally to movement, to animate nature. Clearly, our first consciousness is a tactile-kinesthetic consciousness that arises on the ground of movement that comes to us spontaneously, indeed, on the ground of fundamental and invariant species-specific kinetic acts that we simply "do" in coming into the world, acts such as kicking, stretching, sucking, swallowing, and so on. Such acts happen to us before *we* make them happen. In just

this sense, movement is there prior to "I move." Kicking, for example, is there before *I* kick; stretching is there before *I* stretch. In effect, *movement forms the I that moves before the I that moves forms movement.* Spontaneous movement is the constitutive source of agency, of subjecthood, of selfhood, the dynamic core of our sense of ourselves as agents, subjects, selves. Kinesthetic consciousness in turn defines an emergent, progressively expanding consciousness whose structures can be thematized, i.e., analyzed phenomenologically. In particular, kinesthetic consciousness unfolds on the ground of spontaneous movement and in its initial unfolding reveals not only corporeal concepts on the order of those described above, but spatio-temporal concepts that are basically qualitative in nature and that emanate from what we discover to be the creative, i.e., freely variable, character of our movement. I can, for example, lift my head abruptly or in a sustained manner; I can open my mouth minimally or widely; I can kick my legs rhythmically or at random; and so on. Any movement we make has certain degrees of freedom. That it does — that our movement is freely variable — is a measure of the qualitative nature of movement and potential conceptual richness of our unfolding kinesthetic consciousness. It is furthermore suggestive of how spatialities and temporalities are kinetically created — and even of how space and time are fundamentally constituted in and through our experience of self-movement.

In sum, our primal animateness is of profound epistemological significance. In the beginning is movement. Our very emergence as cognizing subjects is grounded in our original kinetic spontaneity. In effect, what is already there — but not by any means already "*all there*" as Merleau-Ponty would have it (Merleau-Ponty 1962: 198) — is not the world and the body. What is already there is movement, movement in and through which the perceptible world and acting subject come to be constituted, which is to say movement in and through which we make sense of both the world and ourselves. That "I move" arises on the ground of our primal animateness is of equally profound epistemological significance, for it means that movement is the ground on which transcendental subjectivity — in a broad sense, our sense-making or constituting faculty — arises.[10] Movement awakens transcendental subjectivity in the form of kinesthetic consciousness. To see this relationship is to corroborate and extend Landgrebe's account of "[a] prelinguistic acquaintance with oneself as the center of a spontaneous ability to move." In the context of his account, Landgrebe writes that "kinesthetic *motions* ... are the most fundamental dimension of transcendental subjectivity, the genuinely original sphere, so that even the body (*Leib*), as

functioning body, is not just something constituted *but is itself constituting as the transcendental condition of the possibility of each higher level of consciousness and of its reflexive character*" (Landgrebe 1977: 108; italics added). The kinesthetic correlates of perception — what Husserl calls "the kinestheses" — are hence not simply practical perceptual affordances (to use a Gibsonian term: J. J. Gibson 1979), necessary "*functions of spontaneity* belong[ing] to every perception" (Husserl 1989: 63). They are, in their own right, *perceptual experiences*, the most fundamental of perceptual experiences, and as such are at the very core of the constituting I, that is, of transcendental subjectivity.

If the foregoing beginning analysis is phenomenologically sound, then our common task is to elucidate the kinetic-kinesthetic foundations of fundamental human understandings, tracing out the multiple and complex dynamic structures that lie at the heart of fundamental human cognitions.[11] Before attempting to describe just such cardinal epistemological structures inherent in kinesthetic consciousness, I want briefly to consider Husserl's uncertainty and equivocation about kinesthesia with respect to corporeal localization, especially in contrast to his certainty and specificity about the corporeal localization of touch.

3. Kinesthesia

In *Ideas II*, Husserl remarks that by comparison with touch, kinesthesia has "a rather indeterminate localization" (Husserl 1989: 158). He says that "The Body as such can be constituted originarily only in tactuality and in everything that is localized with the sensations of touch" (158). He states that "At bottom, it is owing only to their constant interlacing with these primarily localized sensations that the kinetic sensations receive localization" (158). He states further that the reason kinesthetic sensations are parasitic on touch is that "[they] do not spread out in a stratified way over the appearing extension" — i.e., over the appearing object (158). Moreover in affirming that the indeterminate localization of kinesthesia "makes the unity between the Body and the freely moveable thing more intimate" (158), i.e., makes the mysterious nexus that constitutes "the turning point" from causal material body to conditional living Body more intimate (168–69), Husserl appears to give added emphasis to the locative nebulosity of kinesthetic sensations. In *Ideas III*, however, he at one point declares that kinesthetic feelings are among "localized feelings"(Husserl 1980: 107); two pages later, however, he again speaks of the kinesthetic sense as

having "vague localization" (109), and a page further, he states that "In general we are convinced that primary localization belongs only to the touch-sensations and the sensations going parallel with them," giving as example "the temperature-sensations that follow the stimulated organismal surfaces with their extension" (110).

What, we may ask, is at the root of this spare and uneven understanding of kinesthesia? Husserl's lack of thoroughness and consistency is in fact odd, out of character one might say. Closer reading shows two things. First and foremost, Husserl does not actually consider self-movement as such; he considers only movement with respect to external perception, that is, with respect to perceived objects in the world. His estimation of kinesthesia is thus clearly restricted. Second, when he speaks of kinesthetic flows, he often does so in terms of a visual object so that kinesthetic flows are aligned rather narrowly with eye movements which, as he himself says, "[do] not come into action as such, i.e., as experienced in this apprehension" (Husserl 1980: 109). He at one point even equates the fundamental constitution of space to "oculomotor" activity (Husserl 1989: 347). In short, Husserl does not turn toward self-movement *tout court*, toward the actual perceptual experience of movement in the phenomenon of kinesthesia. His overriding concern is with external perception. His characterization of a solipsist's experience of the Body "from 'within' — that is, in the 'inner attitude'" — clearly shows his exclusive concern. He describes the solipsist's experience or constitution of the Body only as "a freely moving organ (or system of such organs) by means of which the subject experiences the external world" (Husserl 1989: 168). A descriptive account of the sheer phenomenon of self-movement as it is experienced kinesthetically is distinctly by-passed. Given the earlier insights into the epistemological import of animation, of movement, and of kinesthetic consciousness, it is essential to the task of phenomenology to elucidate self-movement, thereby both amplifying and correcting Husserl's account.

4. Cardinal structures of kinesthetic consciousness

It is in fact appropriate now to ply our trade as practicing phenomenologists, or correlatively, to apply ourselves as humans who, having kinesthetic experiences, can examine them, paying rigorous attention to what is actually there, sensuously present in our experience, and in turn validating or disaffirming what a phenomenological account discloses.[12] In either case, we begin by attending to "the

things themselves," meticulously examining what is there, going back again and again in order that we may describe and verify for ourselves what is actually present in our experience and thereby discover and validate aspects of our sense-making that lie sedimented within us. In particular, we ply our trade now in order to elucidate cardinal structures of kinesthetic consciousness. We do this by taking a very simple movement, a movement that is basically familiar — an overhead arm stretch — but slow it down and further heighten our sense of movement by making a formal beginning: we start by closing our eyes, by dropping our head so that our chin falls toward our chest, and by resting our hands in our lap. From this beginning position, we lift our arms from the elbow so that our upper arms move upward and our hands come off our lap. We continue that upward movement without a break by extending our forearms upward and overhead, and finally by extending our fingers upward and overhead. At the same time we do all this, we slowly raise our head from its dropped position to the point that our chin faces upward toward the ceiling. We then reverse the movement, first by letting our elbows flex and our chin begin moving downward, and then by simply continuing the movement of arms and head downward until we come to our original position. We do this sequence of movements three or four times slowly, by ourselves, keeping our eyes closed and sensing the phenomenon of self-movement.

We next perform free variations on this movement theme or sequence of movements, not imaginative free variations as is customary in phenomenological practice, but actual free variations in order to appreciate first-hand, in experience, what is kinetically there. Our purpose is to discover, in Husserl's words, "what holds up amid such free variations of an original ... as the invariant, the necessary, ... without which something of [this] kind ... would be altogether inconceivable." What we want to know is precisely what invariants "[pervade] all the variants" of movement (Husserl 1977: 54).

Let me suggest a variety of possible variations. Rather than moving through the sequence slowly, I can move through the sequence quickly; rather than moving slowly or quickly through the entire sequence, I can move through the first part slowly and the second part rapidly; I can gradually accelerate as I move through the whole pattern, or I can do the reverse, move rapidly in the beginning and progressively decelerate until I come to the end. Clearly, there is a manifold of possibilities with respect to the temporality of my movement. There is similarly a manifold of possibilities with respect to the tensional aspects of my movement. I can move through the pattern with great force, that is, in such a

way that I generate a determined and powerful tension; I can move through the pattern weakly, barely expending any energy at all; I can play around with the intensity of my movement, alternating regularly between extremes, for example, shifting gradually into higher and lower gears, spasmodically changing tensions, and so on. I can furthermore vary the manner in which I project force: I can fling my head and arms up and down in a ballistic manner, throwing them upward and downward with a single initial force; I can move them in an even, sustained manner; I can move them suddenly and abruptly such that the movement proceeds as if on an off-and-on switch; I can move them in ways that combine any or all of these projectional possibilities. I can similarly vary the movement spatially, in both a linear and amplitudinal sense. I can emphasize either straight or curved lines in the movement of my arms, for example, or I can accentuate now the one, now the other linear aspect; similarly, I can augment or diminish the magnitude of the movement, bringing the upward movement of my arms to a less than full extension, for example, or making the upward movement broader so that it expands outward as well as upward as it reaches the peak of extension. In sum, I can make seemingly endless dynamic variations.

The question is, what is invariantly there through all these variations — and any further ones anyone could possibly imagine? What is invariantly there is in each case an overall *quality*. Whatever the variation, the movement has a distinctive felt qualitative character coincident with that variation, a felt physiognomic aspect which is in fact a constellation of qualitative aspects. These qualitative aspects — dynamic structures inherent in movement — enter into and define our global qualitative sense of any particular movement variation; they make all of the variations immediately distinctive to us *as variations*.

We notice to begin with, then, that kinesthetic experiences are not equivalent to experiences of a mere change in position, any more than movement itself is a mere change of position. In each case, what is of moment is fundamentally a matter of *change*, not of position. In other words, kinesthetic consciousness is fundamentally a consciousness of an unfolding kinetic dynamic. Moreover we might note that while most of our adult ways of moving are typically habitual and qualitatively apparent to us only at the margins of our awareness, the typically habitual and qualitatively marginal were at one time focal; hence, originally, in assaying or in successfully accomplishing any movement for the first time, we were aware of its felt qualitative character. To get a sense of this originary experience, we need only try different ways of doing something habitual — something like walking, for example, changing not only our leg

swings, for instance, by initiating movement from our ankle joints by a spring action rather than from our hip joints, but changing our arm swing, the curvature of our spine, the cadence of our walk, the amplitude of our step, and so on. Calling attention to ourselves in movement in this way, we have the possibility of discovering what is invariantly there in any felt experience of movement. This is because whatever the habitual movement, it now feels strange, even uncomfortable. Just such oddness jars us into an awareness of what we qualitatively marginalize in our habitual ways of doing things. By making the familiar strange, we familiarize ourselves anew with the familiar.

As might be evident, kinetic free variations disclose four primary qualitative structures of movement having to do with force or effort, with space, and with time. These qualitative aspects of movement are of course separable only reflectively, that is, analytically, after the fact; experientially, they are all of a piece in the global qualitatively felt dynamic phenomenon of self-movement. Any movement has a certain felt tensional quality, linear quality, amplitudinal quality, and projectional quality (Sheets-Johnstone 1966).[13] In a very general sense, the felt tensional quality has to do with our sense of effort; the linear quality with both the felt linear contour of our moving body and the linear paths we sense ourselves describing in the process of moving; the amplitudinal quality with both the felt expansiveness or contractiveness of our moving body and the spatial extensiveness or constrictedness of our movement; the felt projectional quality with the way in which we release force or energy. Linear and amplitudinal qualities obviously describe spatial aspects of movement; tensional and projectional qualities obviously describe temporal aspects of movement, what we recognize as the felt intensity of our moving bodily energies and the felt manner in which we project those bodily energies — in a sustained manner, for example, in an explosive manner, in a punctuated manner, in a ballistic manner, and so on. Temporal aspects of movement are the result of the way in which tensional and projectional qualities combine; that is, the temporal quality of any movement derives from the manner in which any particular intensity (or combined intensities) is kinetically expressed.

On the way to spelling out the nature of these qualities more precisely, I should call specific attention to the fact that movement *creates* the qualities that it embodies and that we experience; thus it is erroneous to think that movement simply takes place *in* space, for example. On the contrary, we formally create space in the process of moving; we qualitatively create a certain spatial character by the very nature of our movement — a large, open space, or a tight, resistant

space, for example. In effect, particular spatial designs and patterns come into play with self-movement, designs and patterns that have both a linear and amplitudinal quality. The predominant shifting linear designs of our moving bodies may be now curved (as when we bend over), now twisted (as when we turn our heads), now diagonal (as when we lean forward), now vertical (as when we walk), and so on; the predominant linear patterns we create in moving may be now zig-zag (as in a game of tag), now straight (as in marching), now circular (as when we walk around an object or literally 'go in circles'), and so on. The linear contours and linear paths we create in moving are basically *directional* aspects of our body and our movement; the amplitudinal designs and patterns are basically *magnitudinal* aspects. With respect to the latter, both our bodies in the course of moving and our movement itself create a certain spatial expanse and thus have a certain scope or span. For example, when we sit down, we contract ourselves into a progressively smaller shape; in contrast we expand ourselves to the fullest when reaching for something that is almost out of reach. Similarly, when we run, our movement creates an extensive space in contrast to the tight and constricted space it creates when we pace up and down.

We can notice these spatial and other created qualitative aspects of movement quite apart from purposefully changing what is kinetically habitual for us, that is, quite apart from purposefully making the familiar strange. Unexpected moments in everyday experience present opportunities for noticing created aspects of movement, as when we pick up a suitcase lighter than anticipated. Such an experience — which from a phenomenological perspective might be described as "inadvertently making the familiar strange" — highlights in particular the created tensional quality of movement: we prepare ourselves in anticipation of moving in a certain encumbered way and are thrown off guard by the surprising ease we find in lifting and carrying. We thereby become aware of the kinetic energy that drives our movement. What usually passes unnoticed comes to the fore. In turn, we slacken our tension and generate less energy. But in turn too, we subsequently move more fluidly and create a different kinetic temporality in the process. We move not with a jerky cadence as we anticipated, but with a cadence that is rhythmically unbroken. Not only our steps but our whole-body movement is smooth and even. In effect, we not only generate less energy; we generate it in a flowing, steadily continuous manner: one leg swings easily forward, then the other, then the first, and so on. In such ways the temporality of our movement — the temporality of the kinetic energy we create in virtue of the tensional and projectional qualities of movement — is qualitatively different

from what it would have been had we actually encountered the weight we expected.

Coincident with the foregoing example, a further point should be made, one that highlights a fundamental aspect of the intimate relationship between kinesthesia and self-agency. Like an infant's differential experience of weight in lifting its head and lifting its arm when lying prone, our own differential experience of weight in lifting a suitcase lighter than expected is grounded in certain kinesthetic regularities. Indeed, imagine what it would be like for us — infant or adult — to experience each time we lifted a particular thing — our head, our arm, the same packed suitcase, or whatever — a different weight from the last. In other words, suppose that we had no reliable expectations of weight because, whether a matter of lifting ourselves — in whole-bodied or partial fashion — or a matter of lifting objects, there were no regularities, no harmonious orderings (as Husserl would say) with respect to our kinesthetic experiences. Were this to happen, self-movement would be a perpetually awkward affair; we would be kinesthetically at a loss to move effectively. In consequence, our sense of ourselves as agents would be compromised. Reliable kinesthetic expectations, like the kinesthetic regularities on which they are based, are foundational to our sense of agency, to our building a repertoire of "I cans," to our ability to move in consistently meaningful ways. Our sensitivities to, and knowledge of, kinesthetic regularities come of course from moving ourselves and experiencing the created force, effort, or energy — and the created spatiality and temporality — that is kinesthetically there each time in any particular overall movement dynamic. It bears emphasizing that these regularities are not simply localized bodily phenomena. Our experience of lifting a suitcase, for example, is not simply "an arm movement," but engenders a whole-body tensional quality that is peculiar to the particular lifting movement we happen to make. Indeed, whatever we do, whether we lift, push, pull, climb, run — or fall — we do so all of a piece. Our whole body is engaged in moving, sometimes engaged simply by being still, as in the preparation to swing at an oncoming ball, or to begin moving a pen upon a blank page, or to speak in response to a question. Moreover parts of us are at times necessarily still while other parts of us move, their stillness being essential to our movement, as in threading a needle or performing surgery or singing an aria — or reading. The *harmoniousness* of our kinesthetic consciousness is harmonious first of all in just this sense: the body moves as an integrated whole. Short of this fundamental kinetic integrity, we could hardly

discover regularities. We would be constantly battling an essentially random, fitful, and in consequence, unknowable body.

5. A descriptive analysis of movement and a further clarification of kinesthesia

A brief descriptive account of each quality of movement as it might appear in an imagined unvarying and ongoing movement sequence one performs oneself will bring into fine focus how created kinetic qualities enter formally into the global qualitative experience of any movement one might make, and how no experience or sense of a spatio-temporal dynamic is possible apart from self-movement. The crucial role of kinesthetic experience to the experience or sense of a spatio-temporal dynamic strongly suggests how the constitution of space and time have their genesis in self-movement, and why the consciousness of animate forms — "flux" as Husserl speaks of consciousness (Husserl 1964) — is in the most fundamental sense just such a spatio-temporal dynamic. The first epigraph prefacing this chapter already points us in the direction of this suggestion: "*Animation* designates the way in which mind acquires a locality in the spatial world ... and together with its corporal support, acquires *reality*." The capsulated phenomenological insight into a core significance of movement is, of course, in itself remarkable. As noted earlier, movement — animation — seldom if ever comes into thoughtful philosophical conjunction with cognition, that is, with "mind." The insight becomes even more remarkable and specifically suggestive of the constitution of space and time in the context of philosopher Ronald Bruzina's recent investigations into the phenomenology of time, especially his penetrating studies of Eugen Fink's elaborations of Husserl's internal time consciousness, for in this context, Husserl's insight can be readily and aptly augmented in a spatio-temporal sense. Specifying the way in which Fink's analysis of time is fundamentally coincident with Husserl's, Bruzina writes (in part quoting Fink) that "Fink's formulations ... are meant to express in specific ways a point that Husserl insisted upon, namely, 'that original temporality as the meaning of the being of transcendental subjectivity is always spatial'" (Bruzina 1995: 20). The suggestion that self-movement is at the heart of transcendental subjectivity in the form of a spatio-temporal constituting kinesthetic consciousness is virtually transparent the moment one links Husserl's insight to the intent of Fink's formulations. In the following section, we will examine this suggestion

specifically. For the present, we note a significant coincidence along the lines of the suggestion: in addition to bringing the created qualities of movement into finer focus, the following descriptive account of movement will alert us to a lexical challenge that kinesthetic consciousness presents, a challenge that coincides with the one Husserl recognizes precisely in the context of describing internal time consciousness.

Let us imagine ourselves walking with resolute step. We find in this way of walking a tensional quality that is taut and hard. We have a sense of our bodies and our moving gait as firm and strong. We find a projectional quality that we might describe in terms of a sharp and even striding, or a flat and heavy clumping; in either case, our projection of force is measured, unhesitant, deliberate. We find linear qualities describable in terms of straight-line bodily contours and straight-line paths of movement, undeviating direct linearities in each instance. We find amplitudinal qualities describable in terms of a controlled but unconstrained bodily spatiality, that is, a controlled but unimpeded range of movement as we carve an unobstructed space. All of these qualities coalesce in the global phenomenon we imagine: "walking with resolute step." Together they articulate an overall spatio-temporal dynamic, a dynamic that coincides with the intended image: "walking with resolute step." Accordingly, the dynamic is there in the imagined movement. Similarly, when we actually walk with resolute step, the dynamic is there in the actual movement. An examination of our own experience thus demonstrates to us that no configuration of qualities exists apart from its creation: there is no firm and strong tensional quality, no sharp and even striding, no straight-line designs and patterns, no controlled but unimpeded amplitudes short of their imaginary or perceptual instantiation in movement. In actually walking with resolute step, we can sense ourselves creating this spatio-temporal dynamic and attend specifically to any of its qualities; any time we care to turn our attention to them, there they are. We find, then, that in moving, we bring a certain play of forces to life and spatialize and temporalize them in the process. An overall dynamic with distinctive qualities is created by our movement and experienced in our kinesthetic consciousness of movement.

Now it is one thing to attend to movement kinesthetically and to discover experientially the distinctive play of qualities that are there in our movement, and quite another to try to put that kinesthetic experience into words. It is not only difficult to find adequate adjectives or nouns by which to describe the different qualities we experience in moving, but difficult to avoid unwanted associations along the way. The terms force, effort, and even energy, for example, have a

somewhat static ring — they may well conjure up a contained amount of "muscle contraction," an amount one supposedly dissipates in the process of moving. On the contrary, the tensional quality of any movement is not a power package which one progressively unwraps. Force, effort, or energy is continuously created in the process of moving; it is part of the global kinetic dynamic, the changing, shifting interplay of created spatialities and temporalities. Clearly, the gap between the experiential and the linguistic is not easily bridged, but kinetic experience is not on that account doubtful in the least. While fine-grained kinetic terms to describe the created qualities of movement are hard to come by — if not at times seemingly altogether lacking — the qualitative experience itself is kinetically unmistakable. When we pay attention to our own movement, we find that that nonverbal experience has a distinctive spatio-temporal dynamic coincident with the manner in which we are moving. Appreciated in this perspective, what Husserl says with respect to "the temporally constitutive flux" that is "absolute subjectivity" — "For all this, names are lacking" — is not unlike what may be said of kinesthetic consciousness. More than this, given the crucial role of kinesthetic experience to the experience of a spatio-temporal dynamic, the similarity in verbal difficulties strongly suggests that kinesthetic consciousness is the prototype of world-constituting consciousness, the prototype, that is, of our dynamic sense-makings of the world. As pointed out and discussed earlier in section two, we make sense of our bodies first and foremost. We make sense of them in and through movement, in and through *animation*. Moreover we do so without words. This primordial sense-making is the standard upon which our sense-making of the world unfolds. Indeed, short of this corporeal sense-making, our sense-makings of the world would be virtually impossible, mere registerings of whatever happens to come along — something passing through our visual field, for example, or coming within hearing range, or touching our shoulder. Indeed, we would be not unlike the statue Condillac describes, a statue that has first this sense then that sense given to it, but that, lacking movement, is powerless to know the world except in a purely happenstance way (Condillac [1754] 1982). Indeed, the world would reduce to random events which, in the absence of active exploration, could hardly give rise to the idea of full-fledged objects, let alone full-fledged subjects. Landgrebe's earlier-cited emphasis upon the foundational significance of kinesthesia is particularly noteworthy in this context. The body is not merely a thing of which we make sense as a functioning unit. Our bodies, *through movement*, through what Landgrebe calls "kinesthetic motions," are the very source of our being in the world — "the center of a

spontaneous ability to move" — and the very condition of our constituting the world — "the transcendental condition of the possibility of each higher level of consciousness and of its reflexive character." Clearly, by "kinesthetic motions" Landgrebe means not simply movement, but self-movement, movement which, by its very nature, is experienced kinesthetically, that is, by a moving subject him/herself. It is precisely in this sense that animation is at the very origin of consciousness; kinesthetic motions are, precisely as Landgrebe describes them, "the genuinely original sphere." From this vantage point, a similarity in lexical difficulties is not surprising. The lexical challenges kinesthetic consciousness presents are reflected in what flows from it with respect to "each higher level of consciousness" because kinesthesia is at the core of consciousness. Its dynamic spatio-temporal nature is part of the "fundamental dimension of transcendental subjectivity"; its nature thus informs "the temporally constitutive flux" that is consciousness.

Phenomenological grounds for affirming kinesthetic consciousness to be the core of transcendental subjectivity, transcendental in the sense of specifying originary epistemological structures and ones common to all subjects, are plainly evident. When our primal kinetic spontaneity and kinetic sense-making are taken into account, they leave no doubt but that in the most fundamental sense, "movement is the mother of all cognition." Further, when kinesthetic consciousness is phenomenologically analyzed, there is no doubt but that it is foundationally a temporalizing and spatializing consciousness. Indeed, however marginalized in our everyday awareness, there is no doubt but that self-movement is a spatio-temporal phenomenon, a phenomenon in which distinctive spatio-temporal dynamics are consistently created, that kinesthesia gives us direct and immediate awareness of these created dynamics, and that, in turn, kinesthesia leads us to the experiential core of constituting consciousness.

Clearly, when we turn our attention away from the everyday world — from external perception — and toward the movement of our own bodies, we experience ourselves kinetically; we perceive our own movement. This very experience, however, confronts us with an enigma of sizable phenomenological import and proportions. We have not always been the adult bodies that we now perceive ourselves to be. In other words, we have a history to account for. Two facets of the enigma should in particular claim our attention. In the beginning, we were *all* challenged to learn our bodies. None of us came into the world thoroughly knowledgeable in the ways of being the bodies we are. Not only did we all learn to walk and to speak, but prior to these fundamental "I cans," we all *discovered*

ourselves in the acts of sucking, swallowing, crying, kicking, turning, stretching, reaching, smiling, babbling, and much, much more. In the process of discovering ourselves in all these ways, we expanded our repertoire of "I cans"; we learned possibilities of movement and became progressively aware of our capacity to move effectively with respect to these possibilities — by moving ourselves. It is important to emphasize that in these situations, we were precisely *discovering* our bodies, not *controlling* them. In attending to and exploring our primal animateness, and in thereby learning the myriad ways in which our bodily movement related us, and could relate us, to a surrounding world, we were apprentices, not would-be masters, of our bodies. In effect, a dichotomous mind/body rendition of infancy is an unfounded adult projection. An infant is not a mind trying to control a body nor is it an out-of-control body waiting for a mind to catch up with it. Any close observation of infants and young children — not to mention developmental and clinical literature of the past 20 years and more — shows unequivocally that these conceptions are unfounded. One facet of the enigma is thus to know as adults what it is like to learn one's body *by being it*, in particular by being it in movement, and more particularly to know what it is like to experience this self-movement as something other than the attainment of mind over matter.

Fink's call for a "constructive phenomenology" (see also Husserl 1973a: 79, 141) decisively affirms the need to account for our originary experiences of movement and in fact leads us precisely to the second facet of the enigma. Fink writes that "[I]t is not only the worldly facts of birth and death through which transcendental questions about a genesis are to be 'constructed', but also the world phenomena of *early childhood development*, insofar as precisely this early period lies beyond the reach of our memory.... The *transcendental* response to [this question of a period beyond the reach of our memory]... cannot proceed in intuitive fashion, i.e., it cannot bring the archaic building processes actually to a present or recollective self-givenness, it can only 'construct' them" (Fink 1995: 63; italics in original).[14] The question is: how does one proceed to construct what is not only "beyond the reach of our memory" but *what is before language*? In particular, how does one proceed to construct our originary experiences of movement, thus our beginning kinesthetic consciousness? The most direct answer is perhaps obvious: to move, and in moving, challenge ourselves anew to learn our bodies. Such a challenge does not properly turn us toward wielding a new tool, toward manoeuvering with new gear or garb, or toward any other like kind of novel kinetic manipulations or constraints. It properly turns us toward self-

movement *tout court*. In effect, it turns us to purely kinetic, natural everyday movements such as walking, stretching, reaching, chewing, bending, and perhaps beyond these, to more complex purely kinetic experiences such as movement improvisation and T'ai Chi. Purely kinetic experiences have no goal or purpose beyond themselves. Walking in this sense is not getting us someplace; stretching in this sense is not exercising; reaching in this sense is not an effective way of getting a book off the shelf; and so on. In each case, *the meaning of the kinetic experience is in the movement itself*. Through such experience, we approximate to what is beyond memory and before language. But the challenge of learning our bodies in motion anew turns us toward something even more. It turns us toward walking, stretching, reaching, chewing, bending, and the like, with what Buddhists would call "bare attention," and what phenomenologists would call a bracketed attitude. In other words, it calls upon us methodologically. (See Chapter 4, this text; see also Sheets-Johnstone 1990.) We are challenged to examine natural, everyday kinetic experiences outside the natural attitude, apart from the retinue of meanings and values the experiences have and have had for us in the course of our normal everyday adult lives. Through such an examination, we arrive at the possibility of rediscovering our kinesthetic consciousness in the most pristine sense, and in turn rediscovering at the most fundamental level what it is to be animate.

Taking the two facets of the enigma seriously, I would like to attempt a beginning descriptive sketch of how a phenomenology of kinesthetic consciousness opens up a phenomenology of the primordial constitution of time. By doing so, I hope to exemplify and to flesh out more deeply the nature of those cardinal epistemological structures specified but not wholly analyzed earlier.

6. Kinesthetic consciousness and the primordial constitution of time

Kinesthetic consciousness is fundamentally a "streaming present." The descriptive phrase comes from Husserl, who describes consciousness generally in just such terms, but the phrase has obvious affinities with William James's "stream of thought, of consciousness, or of subjective life" (James 1950, vol. 1: 239). The point of emphasis here is that, with respect to kinesthetic consciousness, the streaming present is a dynamic flux that we originally experience *qualitatively*. To bring to self-evidence the originary qualitative nature of kinesthetic consciousness, we move in everyday or more complex ways, as suggested earlier,

and examine our experience in a methodical phenomenological manner. In doing so, we discover first-hand and from the beginning that self-movement is not an *object* of consciousness in the way that a chair or a melody or even a flight of birds across the sky is an object of consciousness.[15] From the start, what we find primordially there in self-movement is a felt unfolding dynamic and in virtue of that dynamic, a felt overall kinetic quality — a fleet swiftness, perhaps, or a sluggish heaviness, or a relaxed jauntiness, or an erratic intensity — or a constellation of qualities generated by a more intricate interplay of forces, an interplay that we might describe preeminently in terms of rhythmic complexity and abrupt directional changes, or in terms of constricted, jagged spatialities and alternately violent and fragile energies, for example. Whatever the unfolding dynamic, kinesthetic protentions and retentions[16] are not protentions and retentions of *things* — objects of one kind or another, as with tonal, olfactory, visual, or tactile phenomena in which one note, smell, sight, or texture follows another. Protentions and retentions are not moments of time but temporal dilations that foreshadow and reverberate — "protend" and "retend" — *qualitatively*. Because they are temporally constituted not in terms of momentary successions as such — in other words, in terms of befores, nows, and afters — but qualitatively in terms of an ongoing global dynamic, kinetic expectations and what we might call kinetic lingering auras are not reducible to past and future *nows*. Fleetness, gnarledness, liveliness, determinateness, and so on, have no kinetic "parts" as such. Certainly the streaming present of movement may be accentuated or even suddenly quiescent; it may fluctuate and change in delicate, restless, or even smoothly repetitive and monotonous ways, and in that sense be marked successively, but that marking is constituted in a wholly qualitative manner, not a quantitative, i.e., additive, one. In short, kinetic quality is indivisible. It inheres in the unfolding movement pattern or dynamic as a whole.

Whether movement happens to us or whether we make it happen, when we attend purely to the experience of self-movement, we find precisely an unfolding qualitative dynamic, a dynamic in which a certain temporality is apparent. In the former instance — when we sneeze, for example — we are kinesthetically aware of unfolding suddennesses and suspensions of movement whose lingering aura reverberates qualitatively throughout our bodies. We can conceptually reduce these suddennesses to "quick intakes of breath" and these suspensions to "waiting at the edge of the sneeze proper," but in doing so, we are attending less to a descriptive account of the temporal dynamics of the movement that is happening to us than to a specification of the defining features of a sneeze — to a specification

of sneeze parts, so to speak. When we make movement happen — as when we intentionally breathe in deeply, for example — we are kinesthetically aware of a smooth, protracted temporality whose ongoing smoothness and protraction we anticipate from the beginning; we anticipate what we already experientially know the temporal feel of such a breath to be. Similarly, the lingering aura of the deep breath has the same even, drawn-out temporal quality. In both kinds of kinetic situation, our movement creates a certain temporality, and that temporality is qualitatively constituted. In effect, we experience a particular temporal dynamic any time we attend purely to the experience of self-movement.

In originary self-movement, *what is created and what is constituted are one and the same*. A further way of putting this fundamental character of self-movement is to say that self-movement is originarily not only *not* an object in the usual sense — a *thing* that appears; it is by the same token not a phenomenon that endures across different perceptions of it or that has different profiles to begin with. We can approach visual, auditory, or olfactory phenomena more closely, for example, we can perceive them from now this, now that perspective, and so on. We cannot do the same with self-movement. Self-movement precisely does not show itself in ways other than the way it is. And that way is moreover ephemeral, not enduring. Obviously, something quite different is going on in the perception and constitution of self-movement than in the perception and constitution of objects in the world. In self-movement, a particular unfolding dynamic is kinesthetically present that cannot be otherwise kinesthetically present except by our moving differently and thereby creating a different qualitative dynamic. We can immediately discover and appreciate this uniqueness, this coincidence of creation and constitution, by going back to an experience of self-movement *tout court* and examining what is there. Whatever the movement might be — walking, stretching, reaching, or whatever — we can, temporally speaking, soften or accentuate the flow of the movement — its ebbings, surges, uniformities, punctuations, explosions, attentuations, accelerations, brakings, and so forth. Temporal aspects of movement are malleable and indeed, can be so quintessentially subtle that exact repetition of a particular temporal dynamic can be challenging. In this sense, like everyday object-targeted or goal-oriented kinetic intentions, sheer kinetic intentions *tout court* can be unfulfilled. In other words, even though I am walking simply for the sake of walking, for example, and not walking to the bus stop or to the refrigerator or to meet a friend, I can unexpectedly, and even unaccountably, shift my weight in a peculiar manner from heel to toe, perhaps even turn my ankle or stumble. In such ways, I can fall short of the

sheer experience of walking that is the meaning of my movement. Moreover temporal aspects of movement are fleeting and their impermanence makes their recapture an equal challenge. All that endures of self-movement is a reverberating felt sense of its dynamics. There is nothing tangible to inspect, nothing audible to which to draw nearer, nothing to hold up to the light, and so on.[17] In a word, *kinestheses are correlated only with other kinestheses.* In any attempt to recapture a temporal quality, the point of return is always a kinetic process that is exquisitely fragile.

The ephemerality of self-movement might be said to mirror the ephemerality of time. Indeed, we say that time and movement both *flow*. But if the *flow* of time, as Fink indicates, is a metaphorical flow (Fink 1978: 61), we may rightfully wonder whether it is not the ephemerality of time that mirrors the ephemerality of self-movement. Hence, while Fink also speaks at an earlier point of a "vicious circle" insofar as "On the basis of time, we understand movement, and on the basis of movement, time" (Fink 1978: 61), we might ask if there is not rather a priority; namely, whether we do not have grounds for thinking that our sense of *time itself*, as distinguished from our awareness of *something in time*, is not epistemologically generated in primordial self-movement. In other words, we may ask whether the very eidos of time does not originate in primordial self-movement, and correlatively, whether our everyday *verbal* concept of time, as evidenced in our speaking of time as *flowing*, does not have its origin in that nonlinguistic eidetic intuition.

To explore this possibility, we need first to call attention in a broader way to the notion of quality, particularly from the viewpoint of a constructive phenomenology. We can do this initially by recalling that insofar as what is created and what is constituted coincide in the phenomenon of originary self-movement, and insofar as quality is the very pith of that creation and constitution, quality is properly part of the study of the constitution of time. Quality is thus not only properly a subject fundamental to "investigations concerning the constitution of a *world*" (Husserl 1973a: 154; italics added). It is — one might even say, *antecedentally* it is — properly a subject fundamental to investigations concerning the constitution of self-movement and the process of constitution itself. In particular, what Husserl describes as "*the beginning of a radical clarification of the sense and origin* (or of the sense in consequence of the origin) *of the concepts: world, Nature, space, time, psychophysical being, man, psyche, animate organism, social community, culture*, and so forth"(Husserl 1973a: 154) requires a phenomenological study of quality as a basic structure of animation

and of kinesthetic consciousness as the ground of sense-making or constituting consciousness. Indeed, in keeping with the notion of quality as antecedent, one would want precisely to speak of the beginning of a radical clarification of sense *in consequence of the origin* with respect to most of the named concepts. Quality is what Galileo left behind. It is what Western science leaves behind, quality not only in the sense of kinetic quality, of course, but in the sense of sensory qualities generally. Quality is obviously less substantial than *objects*. Moreover kinetic quality in particular is processual rather than substantive. The studied neglect of quality in the Western scientific world is ironic since it is a structure that is there from the very beginning of our lives — indeed, very likely our prenatal lives insofar as we open and close our lips, wrinkle our forehead, turn our head, and more, even as eleven-week-old fetuses (Furuhjelm et al. 1976: 91). Clearly, a phenomenology of quality as primordially present in self-movement is rich in possibilities, both conceptual and eidetic. As earlier analyses of originary movement and of the awareness of corporeal powers show, such a phenomenology discloses an extensive conceptual field that is foundational to the way in which we come to constitute the world, that is, foundational to our sense-makings. We come to know the world and make our way through it by way of fundamental kinetically-forged concepts that are in the beginning nonlinguistic and that may, for lack of a subtle, fine-grained vocabulary that captures dynamic contours and shadings, even remain nonlinguistic. Where we are not wholly at a loss for words, we have broad ways of qualifying movement, by terms such as swift, sudden, sustained, slow, bursting, rushed, weak, resolute, expansive, constrained, erratic, quick, meandering, and so on. In short, a phenomenology of the qualitative dynamics of originary self-movement leads us to the origin of concepts foundational to our lives as animate organisms and to our knowledge of ourselves as animate — *moving* — organisms to begin with.

With respect to eidetic understandings of a phenomenology of quality, our task is to make explicit in a beginning way how the qualitative nature of primordial movement relates to cardinal epistemological structures inherent in kinesthetic consciousness. These cardinal structures are the very constituents of quality: they are the temporal, spatial, and energic elements of originary self-movement that we have been describing from the beginning. These constituents of quality are cardinal in the sense of their being invariant — eidetic — structures of kinesthetic consciousness, and ones whose nature is clearly distinguish-

able from ordinal structures. Through a consideration of time and temporality, we will be able to exemplify these cardinal qualitative structures in finer detail.

7. The cardinal structure of time

In a recent paper on the phenomenology of time, Ronald Bruzina cautions that we must not confuse felt time with phenomenal world time, the latter understood as "the phenomenology of 'the consciousness of internal time'." It is phenomenal world time that is the focus of his paper. In the context of distinguishing between the two kinds of time, Bruzina raises the question of how there is in felt organic living "an awareness of its time" and of whether such time could in fact be "characterized in terms of noetic-noematic structure," that is, in terms of acts of meaning (perceiving, judging, remembering, and so on) and meaning structures (aspectival, historical, and other dimensions of *the meant*). An answer to his question is succinctly if unwittingly illustrated by Aristotle in his discussion of "how many ways we speak of the 'now'" (*Physics* 222b27–30). The Aristotelian answer highlights in a decisively striking way the nature of "felt time." It highlights as well a constitutive distinction between ordinal time — what I earlier characterized as "quantitative" or "additive" time — and cardinal time. Aristotle states that "The 'now' is the link of time" and that it is spoken of in terms of "at some time," "lately," "just now," "long ago," and "suddenly" (*Physics* 222a-10ff.). Clearly, there is something jarringly odd about the last of Aristotle's examples. "Suddenly" has a decisive temporal character wholly distinct from the other terms. It has in fact a *qualitative* temporal character that is nowhere evident in a "just now," for example, or a now in relation to "long ago." Aristotle says simply that "'Suddenly' refers to what has departed from its former condition in a time imperceptible because of its smallness" (and goes on from there to speak of change, destruction, and coming into being) (*Physics* 222b15–16). By his definition, he is obviously taking "suddenly" as a quantitative term parallel to the other quantitative terms or phrases he gives. In the context of self-movement, however, "suddenly" is something quite other than an interval of time "imperceptible because of its smallness." It is a *qualitatively* experienced temporality, just as rushed, prolonged, or creeping are *qualitatively* experienced temporalities.[18] All such "felt time" experiences are cardinal by their very nature.

Two arithmetical comparisons will help clarify that nature further. Cardinal temporality is akin to recognition counting: one *sees* two dots on a blank page or

two sheep in the field, one does not count them; one *feels* one's two legs or two shoulders or two hands, one does not count them. In recognition counting, a certain qualitative-spatial gestalt presents itself; it is immediately apparent in the perception. Cardinal temporality is similarly akin to original kinetic bodily pairings — of inhalation and exhalation, for example, of opening and closing (eyes, mouths, or fist), of walking on one foot then the other, and so on. In such kinetic bodily pairings, it is the feel of the movements, *not their numerical ordering* — which indeed is in many instances an arbitrary ordering since the phenomenon is cyclical and each member of the pair is dependent on the other for its appearance — that is paramount. In brief, cardinal temporality, like recognition counting and original kinetic bodily pairings, is experienced *physiognomically*. For any particular temporality to be the temporality it is — as for any number in recognition counting or for any kinetic bodily pairing to be, respectively, the number or pairing it is — a certain temporal quality is essential to it: an ongoing evenness as when we walk normally or an ongoing unevenness as when we walk with a limp; a jaggedness as when we move in fits and starts, a swiftness as when we punch an oncoming ball; a suddenness as when we duck, a hesitant slowness as when we move warily with apprehension and stealth; and so on.

In our approximations to primordial kinesthetic consciousness via self-movement *tout court*, we experience precisely the cardinality of time, not its ordinality. We do not experience kinetic *befores, nows, and afters*. This tripartite *ordinal ordering* of time is a sophisticated, reflective attainment that, in terms of the originary temporal structures of self-movement, imposes divisions where none exist, divisions that if present would in fact disrupt what is experienced as a global qualitative dynamic. Empirically-based psychological-psychiatric studies of infants corroborate this constructive phenomenological finding. In particular, infant psychiatrist-psychologist Daniel Stern's descriptive account of "vitality affects" attests to the physiognomic character both of originary self-movement and of our original perceptions of others (Stern 1985, 1990). In explaining vitality affects, he writes to begin with that the category is necessary "because many qualities of feeling that occur do not fit into our existing lexicon or taxonomy of affects." He goes on to say that "These elusive qualities are better captured by *dynamic, kinetic terms, such as 'surging', 'fading away', 'fleeting', 'explosive', 'crescendo', 'decrescendo', 'bursting', 'drawn out', and so on*" (italics added). He states further that "These qualities of experience are most certainly sensible to infants and of great daily, even momentary, importance" and that we ourselves as adults "are never without their presence, whether or not we are

conscious of them" (Stern 1985: 54). Moreover he explicitly affirms that infants experience these qualities both "from within" and "in the behavior of other persons" (Stern 1985: 54). In short, originary temporal structures of experience are cardinal in nature; vitality affects — surgings, fadings, and all such qualitative features of experience — are primary with respect to our experiences of ourselves and our experiences of others.

Now to say that there are no befores, nows, and afters in originary self-movement experiences — or in vitality affects more generally — does not mean that there are no if/then relationships. The latter dual ordinal-ordering is not only distinctly different numerically from a tripartite ordering of befores, nows, and afters; its intentional structure is different. If/thens — what Stern in fact describes under the term "consequential relationships" (Stern 1985: 80–81) — are essentially causal in nature, essentially causal in the sense of a subject actually doing something and thereby bringing something else about. In the context Husserl speaks of them, if/then relationships refer specifically to the correlation between certain movements I make and certain perceptions I have in consequence of those movements — drawing closer to something, for example, or turning something about in my hand. What my movement does is bring about different aspects, or in Husserl's terms, different *profiles* of things. My movement is in this sense causally efficacious or informing in particular ways. If/then relationships are thus certainly temporal by nature, but not apart from my movement, that is, *not apart from the particular dynamics of the kinetic acts* which bring about the essentially causal if/then sequence. In this sense, if/then relationships have a central qualitative aspect, an aspect that in fact may be pivotal to the way in which a particular if/then relationship actually plays out. Consider, for example, head-turning in relation to seeing a mosquito that a friend tells me is on my bare arm. If I turn my head slowly, then I may well see the mosquito; if I turn my head quickly, then I may well see nothing at all because the mosquito will have flown away, my too abrupt movement having disturbed it.

Phenomenological studies of time are commonly riveted on its ordinality. The sequence before-now-after is consistently the principal concern for Sartre and Merleau-Ponty as well as for Husserl, for example. But temporality clearly has another more basic and global dimension, a dimension which, although Husserl did not explicitly recognize it, is adumbrated in his allusions to *style* — as in, for example, "Every man has his character, we can say, his style of life in affection and action" (Husserl 1989: 283).[19] The term *style* unquestionably specifies a *qualitative* character. In temporal terms, this qualitative character

might be spelled out as hurried, relaxed, or abrupt, for example. It might also, of course, be spelled out in spatial and tensional terms — e.g., expansive, intense, lethargic, and so on. It is significant that Husserl's concern is with the style of things in the world as well as with the style of animate organisms. In this regard he speaks specifically of "qualitative change" (Husserl 1981a: 239). Although he describes qualitative change broadly, notably, in terms of the alteration or nonalteration of things and not in detailed descriptive terms that attempt to grasp the physiognomic dynamics of a thing's change, he is nonetheless aware of the fundamental importance of quality. He in fact makes pointed reference to the fundamental importance when, after introducing the notion of the world as constituting a singular perspectival style — "a totality of perspectives for me" (Husserl 1981a: 238) — where things progress harmoniously or disharmoniously, i.e., where things may run "counter to the [singular] style" by being illusions, for example, (239) he subsequently notes that what he has said thus far falls short of being a full description of "the concrete style of appearance … [f]or there was no discussion of quality" (239). In short, Husserl's consistent references to qualitative change within his discussions of style implicitly acknowledge the intimate connection between style and quality. Moreover when he speaks in the same essay of two kinds of style, the style of appearances and the causal style "experienced within the temporality of immanent life," he notes with respect to the latter that "The style of change [of something in the world], in its 'rest' (in its momentary nonalteration) and 'motion', is inseparably connected to my possible resting or moving" (239). By the latter remark, he is, of course, clearly tying the changing character of things in the world to causal if/then relationships, that is, to a moving subject. But a basic concern, as indicated, is with normal and abnormal "styles of appearance," that is, with the possibility of things developing anomalies that intrude on what we otherwise perceive to be a "harmonious style of change" (239). The point of moment here with respect to these two styles is that the temporality of appearances — the temporality of things as they are experienced — has a certain cardinal temporal aspect that is tied both to alterations or nonalterations of a thing in itself and to a subject's movement with respect to the thing. In other words, the "*style of change*" of any appearance is coincident with a certain kinetic dynamic — a certain vitality affect, to borrow Stern's term — realized by changes in the thing itself and by the movement of a subject in relation to the thing. A thing explodes, sags, breaks, swells, recedes, quivers, flutters. Alternatively, it endures unaltered across perceived changes as we move (run, reach, recoil, pause, embrace, stumble …) in relation to it,

experiencing different profiles of it. Each and every appearance has a distinctive temporal character.

Similar remarks may be made about Merleau-Ponty's Husserlian-derived elaborations of *style*. Like Husserl, Merleau-Ponty does not explicitly elucidate the qualitative dimensions of style, though clearly these dimensions are just as latent in his allusions — as, for example, when he writes that "[Movement and time] bring about the patterning of tactile phenomena.... The style of these modulations particularizes so many modes of appearance of the tactile phenomenon...."(Merleau-Ponty 1962: 315). Recognition and elucidation of the qualitative character of style would show here too that, with respect to animate organisms, *style* is originarily a matter of the qualitative structures of movement. It would show precisely the way in which cardinal structures of animation coalesce and kinetically articulate a certain qualitative dynamic that we intuit and that we linguistically identify by the word *style*. Indeed, we may ask, what is *style* in such instances if not an affirmation of a certain kinetic character, a *certain manner of doing things*? And what is a certain manner of doing things in a temporal sense if not moving with a distinctive *qualitative dynamic*, that is, not just proceeding actively in a certain *order*, but actively creating a quite particular temporal quality? Anything that we call a "behavior" has in fact a generic temporal quality in just this cardinal sense. Throwing has a certain temporal character that is distinct from reaching, for example, just as kicking has a certain temporal character that is distinct from stamping, or that walking has from running, and so on. Certainly there are and/or can be variations within these separate "behaviors," but each behavior is distinctively what it is precisely in virtue of its temporal — spatial and energic — quality.

Brief amplification of earlier descriptions of qualitative protentions and retentions is informative in this context. These temporal aspects of kinesthetic consciousness are, in an originary sense, precisely not ordinal in nature. The originary experience of time in self-movement, what we might call the qualitative nature of primordial time, does not run off like notes of a melody. (A melody is the example Husserl uses in analyzing internal time consciousness and in articulating the nature of protentions and retentions [Husserl 1964].) Protentions and retentions in originary self-movement do not adhere to discrete objects; they do not in fact adhere to any-*thing* at all. Rather, temporal expectations and lingering auras are embedded in the kinetic flux and flow of self-movement as it is created and constituted; that is, they permeate the global kinetic dynamic — the distinctive style of movement — as it unfolds. While one might object that

such a descriptive account of protentions and retentions verges on a rendition of life as a dance[20] and thus distorts understandings of the temporality of everyday immanent life, such an objection misses the point. When we pay attention to self-movement *tout court*, whether for the purpose of developing a constructive phenomenology and thereby gaining insight into what we as adults all once experienced but cannot now remember, or for the purpose of grasping what is actually there, sensuously present in self-movement and thereby gaining direct insight into the cardinal structures of self-movement, what we discover is *quality*. Quality is built into our moving bodies; it is a built-in of the animate world. It is the basic staff of life that in various ways literally informs the life of all animate organisms, both as the style of appearance of an organism's own moving body as it experiences itself in the process of moving, and as a "style of appearance" of something in the world. Given its pervasive reality, it is indeed odd that quality is commonly conceived as something foreign to everyday life, something that is in fact regularly thought to pertain only to a properly "aesthetic" domain of experience. That kinetic protentions and retentions are qualitative, that we find them phenomenologically to be so, and that they can be described as embedded in the kinetic flux and flow of their own creation and constitution clearly refutes the common conception. When we examine our experience of self-movement, we find kinetic protentions and retentions to be consistently part and parcel of a qualitative dynamic in process.

In sum, we learn our bodies by moving and in moving both create and constitute our movement as a spatio-temporal dynamic. If we look more deeply into the matter, we discover that movement is the originating ground of our sense-makings, in phenomenological terms, the originating ground of transcendental subjectivity; we constitute space and time originally in our kinesthetic consciousness of movement. Flux, flow, a streaming present, a stream of thought, consciousness, or subjective life, a style of change — all such descriptive terms are in both a temporal and spatial sense rooted in originary self-movement: they are all primordially present not in the constitution of objects but in our original spontaneity of self-movement, in our original experience and sense of our dynamically moving bodies. To think the reverse is to overlook precisely that in the beginning was movement: we all of us came into the world moving and at the same time had to learn our bodies and to move ourselves. In effect, to think the reverse is to overlook *animation*, the spatio-temporal dynamic that is the foundational structure of that animation, and the fact that that animation is the very bedrock of our coming to know the world. It is ultimately to ignore the

transcendental clues Husserl himself provides in his consistent references to, and descriptions of, both animation and animate organism. His phenomenological insights into the fundamental meanings of animation and of animate organism are in fact a validation of his methodological use of intentional objects as "transcendental clues" (Husserl 1973a: 50–53)[21]. In particular, Husserl took animation and animate organism as transcendental clues to understanding how we come to make sense of the world. However incomplete his phenomenological analyses of animation and animate organism, his insights are springboards to understanding how, in self-movement, we come to constitute ourselves as spatio-temporal forms of life — how, in a broad sense, we make sense of ourselves — and how we derive our very concept of a spatio-temporal world on the basis of our own moving bodies. In this respect, his insights are themselves clearly transcendental clues to the cardinal epistemological structures of kinesthetic consciousness.

Afterword

Philosophers regularly examine the phenomenon of pain, conceiving it prototypical of that class of things known as *qualia*, in this instance, qualia in the form of sensations. They look at the phenomenon of pain prototypically also to raise questions about knowledge of other minds, to specify experiences that separate humans from "animals," and so on. Philosopher David Chalmers, in considering a range of conscious experiences, rightly remarks that "Pain is a paradigm example of conscious experience, beloved by philosophers" (Chalmers 1996: 9).

Philosophers also regularly examine qualia as a feature of what is typically called "subjective" experience. They most frequently examine the subjective experience of the color red, other sensory qualities such as loud and bitter being much further from the center of their attention. Given their preeminent concern with visual qualia, it is not surprising to find that Chalmers's "catalog of conscious experiences" (which he says "[should not be] taken too seriously as philosophy, but ... should help focus attention on the subject matter at hand," namely, consciousness), begins straight off with "Visual experiences" (32 lines). His catalog then proceeds to "Auditory experiences" (21 lines), "Tactile experiences" (5 lines), "Olfactory experiences" (16 lines), "Taste experiences" (5 lines), "Experiences of hot and cold" (4 lines), "Pain" (where the opening sentence in his 7–line entry is the sentence quoted above), "Other bodily sensations" (8 lines),

"Mental imagery" (11 lines), "Conscious thought" (12 lines), "Emotions" (12 lines), and "The sense of self" (8 lines). Under the category "Other bodily sensations," Chalmers lists pain, headaches, "hunger pangs, itches, tickles, and the experience associated with the need to urinate," orgasms, and "hitting one's funny bone." His last sentence detailing this particular category of conscious experiences reads: "There are also experiences associated with proprioception, the sense of where one's body is in space."

Described in this utterly negligible, wayward, and offhand way, proprioception is clearly as misidentified as it is misunderstood. Moreover categorically conceived in company with a highly diverse assortment of "Other bodily sensations," proprioception is clearly misplaced. The very idea of kinetic qualia can hardly surface in such surrounds. Chalmers's deficient conception of proprioception is not of course atypical in the least. Over the long history of Western philosophy, philosophers have consistently omitted a certain type of qualia in their investigative studies of subjective phenomena, and they continue consistently to omit a certain type of qualia, precisely as Chalmers's own "catalog of conscious experiences" so well shows. In a word, Western philosophers not only commonly disregard proprioception and kinesthesia; they appear to know next to nothing of such kinds of experience. They tend to think of both proprioception and kinesthesia, if they think of both — or either — at all, as piddling, inferior experiences. They certainly do not think of either in terms of qualia. And they certainly do not think of either in the insistently bodily terms demanded. On the contrary, qualia for philosophers are mental states or mental objects or brain events. To see red, for example, is to be in a certain mental state or to entertain a certain mental object or to have certain spiking frequencies in a certain area of the brain. Were kinetic qualia mentalized or reductively cerebralized in this way, their living reality would be compromised and their foundational significance to the very enterprise of life would be ignored.

Careful critical reflection on a well-known scenario — a somewhat classic philosophical thought experiment concerning qualia — supports the above claims. Careful critical reflection in fact aptly brings to the fore the price of neglect and trivialization: a lack of empirical credibility. While notable philosophers may argue vehemently about what the thought experiment shows or does not show — i.e., the eliminability or non-eliminability of everything that is not physical — and thus take sides with respect to the reducibility of qualia to propositional statements about brain events, their arguments thoughtlessly pass over something absolutely pivotal to taking the thought experiment itself

seriously, indeed, something that the thought experiment both as it is spelled out and discussed overlooks, namely, corporeal matters of fact. In effect, philosophers on neither side can possibly win the argument because in spite of their intense analytically-riveted and analytically-detailed discussions, like the thought experiment itself, they omit consideration of something essential to a credible realization of the scenario.

Philosopher Frank Jackson first presented his thought-experiment in an essay titled "Epiphenomenal Qualia" (1982). Philosopher Paul Churchland subsequently criticized Jackson's analysis of the experiment in an article titled "Reduction, Qualia, and the Direct Introspection of Brain States" (1985). Jackson answered to Churchland's criticisms in his article "What Mary Didn't Know." The following precis of the thought experiment is taken directly from the latter essay (Jackson 1991: 392).

> Mary is confined to a black-and-white room, is educated through black-and-white books and through lectures relayed on black-and-white television. In this way she learns everything there is to know about the physical nature of the world. She knows all the physical facts about us and our environment, in a wide sense of 'physical' which includes everything in *completed* physics, chemistry, and neurophysiology, and all there is to know about the causal and relational facts consequent upon all this, including of course functional roles. If physicalism is true, she knows all there is to know. For to suppose otherwise is to suppose that there is more to know than every physical fact, and that is just what physicalism denies.... It seems, however, that Mary does not know all there is to know. For when she is let out of the black-and-white room or given a color television, she will learn what it is like to see something red, say. This is rightly described as *learning* — she will not say 'ho hum.' Hence, physicalism is false.

What is the matter with this thought experiment?

The matter with this thought experiment is Mary herself. She is not taken into account as a flesh and bone creature, a living body, an animate form. On the one hand, she is no more than a word-processing device. As such, she belongs to no known natural species. On the other hand, she is no more than a neuroscientific concept factory, indeed, "a trading station where [neurological] factors reside and transact business" (definition of "factory" in Webster's New College Dictionary 1965). In this sense too, she belongs to no known natural species.[22] To flesh out "the matter with Mary" in finer detail, we will first consider a range of corporeal matters of fact commencing with the more obvious. These matters

of fact will show in beginning but decisive ways how fundamental defects contaminate the thought experiment, making it ultimately incoherent and thus, along with Mary herself, inconceivable.

Mary herself has certain skin tones that are neither black nor white. When she sees her hands that hold her book, she cannot fail to see that they match neither her black-and-white book nor her black-and-white television screen, for her hands are neither black nor white.

When Mary "is educated through black-and-white books" (as with books of any color, for that matter), she must first of all learn how to read, which means she must not only learn to use her eyes in a certain oculo-motor fashion that is different from, say, looking from one black and white wall to another black and white wall, but she must engage herself bodily in the world, by turning the book's pages, for example. In fact, even prior to learning how to turn a book's pages, she must learn that a book is a certain kind of object in the world that needs to be opened in a certain way, treated in a certain way, and so on. Moreover she must learn that in order to read a book, she must position herself in certain ways in order to read efficiently and effectively. In short, she must learn certain bodily comportments in relation to books and to the reading of books. If we ask how she learns these comportments, we find only one answer. Mary can learn the proper comportments only if she has already learned her body and has thus learned to move herself.

With respect to Mary's learning to read, her education cannot be breezily assumed as taking place through television lectures on black-and-white television screens and thus involve no persons with skin tones that are neither black nor white. Someone must actually *teach* Mary to read. Such an education is complicated, as any primary grade teacher and attentive parent will attest. Neither can Mary's education be breezily assumed as a purely physical phenomenon since to understand written words, Mary must come to understand that certain configurations of lines and squiggles have certain meanings, i.e., they signify something that has no sensuous presence anywhere in the physical world, not only small configurations like the word "and," for example, but larger configurations comprising sentences. Equally, *concepts* that Mary learns in the course of her education have no actual physical instantiation. Thus it matters not whether Mary, in her "*completed*" physical education, recognizes something in its physical presence or as a constellation of neural firings. In either case, her *concept* — say, of a television screen — is nowhere to be found either in her room or in her brain. Hence "the relevant neuroscientific concepts" that philoso-

pher Paul Churchland claims Mary has learned in the course of her education and that pertain to sensations — including sensations such as *red* that have no corollary in Mary's actual experience, but that on Churchland's account Mary can nevertheless identify as a particular spiking frequency in her brain — have actually no physical instantiation whatsoever, any more than the concept *red* has any physical instantiation when Mary looks at a real tomato upon being let out of her room and senses redness. Whether Mary knows a certain spiking frequency as *red*, or whether she knows *red* experientially in the presence of an actual tomato, the concept *red* is itself unaccounted for physically and unaccountable physically. In brief, Mary's "*completed*" physical education may tell her "everything there is to know about the physical nature of the world," but it does not provision her with a *completed epistemology*.

When Mary is educated through television lectures, she must make sense of sounds she hears being articulated by persons on the screen in front of her, which means she must have knowledge of *speech* — speech production as well as speech perception (Liberman and Mattingly 1985) — and hence must have a sense of what it is to be an articulator of sounds, i.e., a sound-maker. Such a sense would in fact be part and parcel of her instruction about, and knowledge of, the physical nature of the world — part of all of those "physical facts about us and our environment" — but it would likewise be part and parcel of her immediate and unstudied knowledge of herself since, at the very least — i.e., even if somehow she herself never speaks — she can feel and hear herself cough, burp, sneeze, and breathe. Whenever she coughs, for example, she feels not only certain pressures in her chest, but feels herself moving in ways that are quite spontaneous and that have a quite particular dynamic. Now it might be argued that such knowledge of herself does not mean that "sensations are beyond the reach of physical science," as Churchland puts it (1985: 24), that is, that sensations are not representable in the neurophysiology of the brain. As Churchland asserts, *the brain uses more modes and media of representation than the simple storage of sentences*" (24; italics in original). Churchland would thus undoubtedly claim that while Mary's experiential knowledge of herself as a sound-maker and her linguistic knowledge of others as sound-makers are differently represented in the brain, the two knowledges amount to the same thing. Indeed, as he explicitly affirms and urges with respect to sensational knowledge of red and brain state knowledge of red, there are "different *type[s]* of knowledge ... *of exactly the same thing*" (24; italics in original). But Mary's self-knowledge of herself as a sound-maker is not knowledge "*of exactly the same thing*"

as her knowledge of others as sound-makers. Indeed, Mary's experience of herself as a sound-maker remains problematic. Her knowledge of herself as a sound-maker is from the inside in a quite different way from the way that her knowledge of others as sound-makers is from the inside. That is, Mary's actual experience of her own living body affords knowledge that is *qualitatively incommensurate* with her knowledge of what is happening in a brain, whether her own brain or that of another person. Indeed, if Mary is an astute person, someone capable of learning "everything there is to know about the physical nature of the world," then she necessarily knows that her perceptual knowledge of herself as sound-maker is quite different from her perceptual knowledge of others as sound-makers. It is precisely not a question of "different *types* of knowledge ... *of exactly the same thing*," but a question of something Churchland tries to silence, namely, the question of "*what* is respectively known" in each instance, the question of "the nature of the thing(s) known" (24). It is in fact implausible that a purportedly intelligent person like Mary, a person capable of learning "everything there is to know about the physical nature of the world," would disregard differences between knowledge of herself and knowledge of others.

A related dimension of Mary's television education makes a similarly significant point. In spite of their black-and-white appearances, lecturers appearing on Mary's television screen would appear to Mary to be in certain respects like herself. Quite apart from her *physical education*, Mary would be spontaneously aware of physical commonalities between the arms and legs that she sees on the television screen and the arms and legs that she sees *and feels* as her own. When a lecturer turns toward a blackboard and begins drawing on it, for example, Mary, being justifiably presumed as intelligent an observer as she is an intelligent learner, is aware of a physical commonality between the lecturer's leg and arm movements and her own possible leg and arm movements. This knowledge that she has of bodies does not come to her through instruction about brain events but is constituted spontaneously by Mary herself. Even were only lecturers' faces to appear on the television screen, Mary would still be aware of physical correspondences. In particular, without any prior experiences with mirrors, Mary would spontaneously match her own felt face with a face she sees — just like any normal human infant (Meltzoff and Moore 1983). In effect, she would be aware of the correspondence between the visual face of a lecturer and her tactile-kinesthetically felt face, and correlatively aware of the difference between the two perceptions without the aid of instruction from others. In fact, it is only after her spontaneously originating knowledge of faces that she would

later learn in the course of her mastery of "physical facts about us and our environment" about such things as the cross-modal competencies of infants. In just such spontaneous ways as these, Mary would of necessity be aware of her own body as well as the bodies of others. She would be aware of her own body not in a merely physical sense, i.e., her body is an object of particular parts that move in particular ways and not others, and not in a reductive neurophysiological sense, i.e., aware of her body in terms of spiking frequencies in certain parts of her brain, but in an *animated* sense, a directly living proprioceptive-kinesthetic sense, which would include a felt sense of her own movement, of her own movement in relation to the room and the items within it, and of her motivations, as in, for example, her desire to hear another lecture, and hence to move in certain ways coincident with that desire by reaching for the remote, or her inclination to read a book instead of listening to lectures, hence to move in ways coincident with that inclination by leaning forward to pick up a book.

The above critical considerations consistently show that for the thought experiment to be a viable thought experiment, Mary herself has to be a viable person. In fact, she must be a viable person in an even broader sense. She has to do such things as sleep from time to time. Thus, she has to lie down. In effect, she has to get up from the chair or couch on which she sits when she reads a book or hears a television lecture, walk over to her bed, take her clothes off, put on her pajamas, turn the covers back, climb into bed, lie down, and close her eyes. Were she consistently to read and to listen to lectures lying in bed, i.e., were the thought experiment to stipulate that she be in bed from the beginning of her life and continuously until the time that she is let out of the room, and this in order that she might lead a bodily-undistracted life, her life would be short-lived: her muscles would atrophy, she would develop bed sores, and so on; she would not be able to continue her education, let alone actually stand and walk at the time she is "let out" of the room. Moreover not only would Mary have to move about in order to prepare herself for, and position herself to sleep, she would also have to move about in order to eat her meals and to go to the bathroom.[23] Clearly, however hypothetical, if Mary is to be a believable person, she cannot live by books and lectures alone. She has to learn to move herself. She has first and foremost to learn her body. She has to become aware of herself as an animate form, and coincidentally as an agent in the world, even her small world. No instructional books or television lectures can teach Mary her body in this crucial sense. She necessarily learns her body on her own. In fact, were Mary actually to learn a "*completed* physics" and thereby actually to come to

know "all the physical facts about us and our environment," then in the very process of having mastered this wealth of physical information, she would have realized that there is something epistemologically missing. Being the observant, intelligent woman that she is, she would have readily realized that "all the physical facts" in fact omit basic facts of life. In short, by her very nature as an animate form, Mary would know herself to be something both more and other than a mere physical fact. She would know herself in immediate tactile-kinesthetic ways having nothing to do either with bare sensations or with brains. She would know herself in these ways because she would necessarily learn — and in fact have to learn — about herself as a living body before she could possibly even begin mastering all the physical information. Precisely in virtue of knowing herself as an animate form, she would know such things as that, if she moves the graph closer to her, she can read its inscriptions more easily. Indeed, before she could possibly come to conceive of herself as a physical specimen — to know herself as a set of "physical facts" — she would have to have experiences relevant to those "physical facts." Consider, for example, what is involved in Mary's getting up from her chair and moving across her room to the television set. Mary knows herself as a "here" with respect to every "there" in her room, and she furthermore knows herself as an agent with respect to everything in her room. More than this, in navigating in her enclosed space, Mary is both proprioceptively and kinesthetically attuned. She is aware of herself moving slowly or quickly away from her chair; she is aware of herself reaching out a certain distance for a book on the television set; she is aware of herself turning around and pausing before walking back to her chair; and so on. If Mary is a plausible hypothetical Mary, Mary is hypothetically *alive*.

Now when Mary learns to move herself, she knows there are qualia. As indicated above, she knows there are qualia because she experiences kinetic qualities directly, not only such qualities as slowness or quickness when she walks across her room, but qualities such as suddenness when, for example, after reading something in one book, she is impelled suddenly to reach for another book which contains something relevant to the passage she has just read. In a similarly qualitative way, she experiences directly the attenuated manner in which she turns a page or the heaviness of her body as she gets up from her chair. It is her own experiences of kinetic qualities that allow her to recognize kinetic qualities in her world — for example, the slowness of speech of one lecturer in contrast to another. More pointedly still, it is her own qualitative kinetic experiences that allow her to understand physical facts: the idea of an

action potential shooting down an axon when she is studying neurology, or the idea that one thing can collide with another when she is studying quantum physics. Were Mary lacking in tactile-kinesthetic experience and were she to see one thing collide with another on her television screen, she would have no understanding of the collision *as such* because understanding the physicality of the event on a two-dimensional screen is contingent on understanding the physicality of the event in a three-dimensional world, which means having colliding or bumping experiences of one's own. If Mary is to be a plausible person in a plausible thought experiment, she cannot be simply a word-processor and information repository; she must be a hypothetically real *living body*.

Even were the above objections discounted and the second half of the scenario allowed to unfold as it does — Mary's being let out of the black-and-white room and seeing something red; Mary consequently finding that there is something she does not know — other objections would readily expose the same major devastating flaw: a complete and utter neglect of the living body known as Mary, the result both of an empirically defective thought experiment that conceptually reduces a person to a word-processing information repository and of a consistent opacity of philosophers to recognize flesh and bone moving bodies and give them their living due. However putatively complete Mary's *physical* education, however putatively conclusive her knowledge of "physical facts about us and our environment," Mary has been educationally raised on no other standard than language; she has been educated in an exclusively verbal manner. Thus, whatever she might perceive in the normal everyday world when she is let out of the room, she has no basis for understanding it. As the thought experiment itself specifies, the limited world in which Mary has lived has consisted of two colors, whose only interest for Mary has been the words they form, and two objects, whose only interest for Mary has been the words they contain or spew forth. Accordingly, Mary's knowledge is verbal from beginning to end. It is not tangibly, kinesthetically, visually, or in any other *immediate* sensory way connected to the world, neither the larger everyday world into which she is let out and finally enters, nor the confined and limited world in which she has lived. Thus, while Jackson states that Mary learns "what it is like to see something red" when she is let out of her room, Mary in fact has no basis for comprehending "*what it is like* to see something red, or *what it is like* to see — or hear, or feel, or smell, or taste — anything for that matter, for she has no experience whatsoever of *what it is like* to perceive anything. Her concentrated diet of wholly verbal physical facts has omitted consideration of any such

concerns and experiences. The consequences of such a diet are strikingly apparent the moment one considers experiences of kinesthesia and proprioception. Whatever Mary's experiences of movement might have been while confined to the black-and-white room — supposing proper and due attention had been paid to them — the experiences would have been transformed in conformity with her education into propositional statements about physical facts. Self-movement would thus have been for Mary nothing more than statements about lever action, efferent pathways, neuronal tracts, joint angles, and the like. By the very terms of Jackson's scenario, her experience of movement would pointedly lack qualia — expansiveness, zig-zagness, flaccidness, heaviness, and so on. Indeed, according to Jackson, qualia enter into the thought experiment only when Mary is let out of the black-and-white room and sees the color red.

Churchland's objections to Jackson's explanatory "what it is like" construal of Mary's post-confinement situation concern what he calls Jackson's "shortcomings" about various distinctions with respect to the term "knowledge" (Churchland 1985: 23). But shortcomings plague Churchland's own objections, shortcomings that coincide with the very ones shown above to plague Jackson: a blindered tethering to language and a correlative blindered neglect of proprioception and kinesthesia. In the context of specifying his first objection, for example, Churchland distinguishes sharply between verbal knowledge and non-verbal knowledge, or, as he terms the latter, "prelinguistic" knowledge. Sensations are exemplary of the latter kind of knowledge and they have a decidedly lesser status. Thus when Churchland speaks of Mary's seeing the color red, he does not accord the sensation an epistemic value on par with propositional statements regarding physical facts. Indeed, he quite noticeably demonstrates the deficient epistemic value of sensations in his diacritical markings: he speaks not of knowledge of one's sensations but of "'knowledge' of one's sensations," diacritically calling the reader's attention to a form of knowledge distinctly inferior to propositionally-stated knowledge about physical facts (24). In effect, when Churchland affirms that there are "different *types* of knowledge," neuroscientific knowledge and sensation knowledge, it is clear that only the person who "has mastered the complete set of true propositions about people's brain states" is the person who has accurate and proper knowledge (24). It is in this context that Churchland explicitly claims that the important difference between neuroscientific or brain state knowledge and sensational or qualia knowledge is "the manner of knowing" and not "*what* is respectively known" because knowledge in each case is "*of exactly the same thing*," i.e., knowledge of exactly the same brain event. Clearly,

what Churchland overlooks completely in maintaining the identity of the known is that red *as it is experienced* is epistemically different in essential ways from red neuroscientifically rendered in the form of propositional knowledge about a certain state of the brain. A neuroscientifically verbalized red is not red in person — any more than brain neurology is equivalent to actual experience. Hence, whatever the known might be — red, black, Beethoven's Fifth Symphony, a botanical specimen, a hamburger, a plush pillow, Washington's monument, a rare Burgundy wine, the novel *War and Peace* — the *what* that is known is in each case crucially different according to whether it is known as a brain state or an actual experience. When Churchland affirms identity of the *what* and thus denies it any significance, he is in truth affirming that only brain events matter, be they in the form of "prelinguistic" brain representations or linguistic ones. This tunnel-brain vision of knowledge explains why he can urge that Mary, in spite of her limited black-and-white life, can have knowledge of qualia. If Mary "has learned to conceptualize her inner life, *even in introspection*, in terms of the completed neuroscience," then Mary is capable of identifying "various spiking frequencies" in her brain in spite of never having had sensations corresponding to them (25–26; italics added).

On Churchland's account, Mary's knowledge is in fact definitively and narrowly circumscribed: she is capable of knowing nothing other than events in brains, brains in general and her own brain in particular. Insofar as she is capable of formulating everything there is to know in the form of propositional statements about neurophysiological happenings in brains, then whatever her knowledge might be knowledge of — whatever the known at any particular time and place might be — Mary knows it only in a canonical brain language. She does not know anything of the living world because she has never effectively entered into it, not even the small living world that was the black-and-white room in which she presumably lived for many years. Indeed, the words she read and heard inside the room had neither any actual context of utterance nor actual point of reference. Learning one's body and learning to move oneself are crucial in this respect. One has to learn one's body and to move oneself before one can come to have knowledge of a physical world. In short, *if one were really to know "everything there is to know about the physical nature of the world"* (Jackson 1991: 392), *then one would have first of all to experience oneself as a moving, kinesthetically sentient creature*. This requisite is as binding hypothetically as it is binding actually; that is, it is as binding to thought-experiment knowledge as to real-life knowledge. Acquisition of the basic physical notion of three-dimensionality makes the point unequivocally. Only by learning her body and learning to move herself could Mary possibly come to know what it means in a physically exact sense to say, for example, that the hypothalamus is *underneath* the thalamus, or that an electrical force *pushes* positive sodium ions *inward*. Such spatial understandings derive ultimately from a felt sense of her own three-dimensional body, which is to say from proprioceptive and kinesthetic experiences of qualia having to do not just with movement generally, but with weight, force, alignment, mass, and so on. Mary cannot possibly learn the three-dimensionality of objects in the world, even the three-dimensionality of her own brain, short of directly experiencing the three-dimensionality of her own living body. Since according to Churchland, Mary's direct experiential knowledge of her own body and body movement can provide no accurate and proper knowledge of its three-dimensionality — her direct knowledge of her body is mere 'knowledge' — we can justifiably ask how Mary obtains the "relevant neuroscientific concept" of three-dimensionality. We can furthermore justifiably ask other fundamental questions, such as how Mary can possibly navigate in the world if all the time she is moving she is fixated on identifying spiking frequencies in her brain and rendering those frequencies in canonical propositional form. Ultimately, we can justifiably ask, Who is this Mary, this thoroughly enlightened paragon of knowing whose knowledge amounts to nothing more than knowledge of events in her brain? Who is this person who is able to introspect her own brain states but who has no deep and exemplary sense of her own movement? Who is this putative *complete knower* whose life consists solely of words?

In sum, the semi-classic thought experiment fails to provide a coherent and therefore conceivable scenario. One cannot imagine Mary learning all the physical facts there are to learn because, being consummately and exclusively tied to propositional language, she cannot understand in any concrete and full sense the physical facts to which any particular proposition refers. Indeed, being herself nothing more than a neuro-linguistic repository of knowledge, Mary is in fact an inconceivable person. There is, in effect, no hypothetical knower of the knowledge about which philosophers such as Jackson and Churchland are arguing.

Notes

* A considerably shorter version of this chapter was presented at the Husserl Circle meeting in June 1996 in Arlington, TX and at an all-University guest lecture at Trondheim University (Norway) in December 1996.

Without in any way wishing to suggest his concordance with the substance of this chapter, I would like to acknowledge Ronald Bruzina for the central idea that was its genesis. In particular, I found his expositions of philosopher Eugen Fink's elaborations of the work of Edmund Husserl — along the lines of the originating and the originated — to be extraordinarily provocative.

1. Claesges (1964) enumerates six moments of kinesthetic consciousness: time, space, horizon, world (which he says subsumes the previous three moments), body, and self. He identifies these moments without reference to the originariness of movement — its "beforehand givenness" in primal animation — thus without reference to the originating ground of our sense-making. His broad equation of kinesthetic consciousness with these moments and his concern to show that *the world* is pregiven (thus, by his definition, kinesthetic consciousness is pregiven) contain no reference to movement itself.
2. See, for example, Husserl 1989: 351: "But the animal and, in the first place, human beings can also be regarded as reality or nature, and we can here distinguish again between the animal as intuitive unity and the animal as unity of modes of behavior"; and Husserl 1989: 142: "Without the soul, it [the psychic subject] is unable to stand alone; and yet again, it is a unity which in a certain sense encompasses the soul and which is at the same time so prominent that it dominates the general way of speaking about human and animal subjects."
3. What I want tangentially to suggest is that the ontological ground Ronald Bruzina has uncovered in the context of his elucidation of Fink's emendations to Husserl has its epistemological corollary in the primacy of movement: the ontological temporal is coterminous with the epistemological kinetic: the latter too is the grounding ground that defies constitutional explication insofar as it is already there prior to and refusing constitution, but is at the same integrated with it.
4. Cf. Sokolowski (1972: 76): "[A]ll these motions of joints [i.e., the kinestheses] [are] preceded by the activity of motion. And [they are preceded] first of all [by] being awake. There is no basic consciousness without being awake and being awake is one of the basic data. We have to thank our bodies for it." The experience of motion, of course, is not *preceded* by the "activity of motion" but coincident with it. Sokolowski's point, however, about being first of all *awake* is suggestive of being first of all *alive*.
5. See, for example, Spitz (1983), in particular, the essays, "Life and the Dialogue" and "The Evolution of Dialogue."
6. This empirical fact is strongly if indirectly supportive of Husserl's analysis of empathy (1973: Fifth Meditation) in its suggestion that an attentiveness to the movement and actions of what is living is central to our existence.
7. This textual model is well exemplified by Derrida (1976 and in other writings of his as well). For a critique of this textual model, see Sheets-Johnstone 1994, Chapter 4: "Corporeal Archetypes and Postmodern Theory."

8. Obviously, this description of infant experience is not phenomenological. There is nevertheless good — even excellent — reason, to think that, like phenomenologically derived insights, it is true to the truths of experience.
9. By "distinctive" ways of moving, I do not necessarily mean thoroughly unique. Species-overlapping patterns — including bipedality (higher primates other than humans are bipedal but not *consistently* bipedal) — are apparent in many everyday human movement behaviors.
10. For a more detailed clarification of *constitution*, see pages 187–91.
11. Clearly, to allow ourselves to be beguiled by the visual and the lingual is to succumb to a less than fully human assessment of our creaturehood. More than this, a tendency to devalue movement appears to coincide with a basic mind/body split, movement, in effect, being conceived through and through body rather than mind, in turn natural rather than cultural, and so on. In this dichotomous vein, movement is equally aligned with the trivial, perhaps even with what is feminine, particularly if there is no hammer in hand, thus nothing being wielded or manipulated. From this perspective, the mind/body split must be cured, rooted out at its source, before movement can be, or will ever be, given its due. "Animate form" or "animate organism" go a long way toward the cure because they describe what is there first and foremost in our experience: the animate; not "the lived" and not the "embodied," but the unity itself. Indeed, what is "lived" or what is "embodied" join over a gaping conceptual chasm what is still being rendered asunder. (See this text, Chapter Eight.)
12. There are differences, of course, between examining experience in the phenomenological attitude and in the natural attitude. The differences, however, should not in this instance prevent validation or disaffirmation. But see Chapter 4 for differences between introspection in the natural attitude and introspection within the phenomenological *epoché*.
13. I have changed the original descriptive term "areal quality" (Sheets-Johnstone 1966) to "amplitudinal quality."
14. Note that "the world phenomena of *early childhood development*" is, in light of the concern here, the "world phenomenon" of self-movement.
15. A melody — and less centrally a flight of birds and galloping cavalry — is the core of Husserl's phenomenological analysis of internal time consciousness (Husserl 1964).
16. The terms "protention" and "retention" come from Husserl's (1964) analysis of internal time consciousness. They refer to expectations and memories with respect to an ongoing present.
17. This is why Merce Cunningham can write (1968, unpaginated): "you have to love dancing to stick to it. it gives you nothing back, no manuscripts to store away, no paintings to show on walls and maybe hang in museums, no poems to be printed and sold, nothing but that single fleeting moment when you feel alive. it is not for unsteady souls."
18. We could elaborate this "something other" of a qualitatively experienced temporality by saying that "felt organic living time" has a certain physiognomy and that, appropriating musical terms, we might describe it in any number of ways such as largo, andante, allegretto, allegro, presto, staccato, legato, gradamente, ritardando, accelerando, and so on. Because we have a felt *kinetic* sense of the particular way a piece of music or phrase of music unfolds temporally, the terms might seem to us to confer an objective reality upon felt organic living time, to concretize what we might otherwise think of as rather vague and "subjective." But this would be to miss the

origin of such terms; it would be to forget the corporeal source from which they spring, namely, the phenomenon of self-movement: walking, breathing, blinking, coughing, sneezing, crying, laughing, running, sauntering, shoving, pulling, pounding, and so on. All such movements are clearly familiar to us as dynamically lived-through realities. The felt temporality of these realities, however, is not something of which we are ordinarily mindful as adults. Indeed, it may well be that a vocabulary attuned to the dynamics of movement is lacking because adults do not attend to self-movement in the way they attend to the dynamics of sound in the form of music. Hence it is not surprising that what Husserl said in his attempt to pinpoint descriptively "the temporally constitutive flux" — "For all this, names are lacking" — can be said of the lived temporal experience of movement, and in particular for our considerations here, the lived temporal experience of *self*-movement.

19. See also further on the same page: "one can to a certain extent expect how a man will behave in a given case if one has correctly apperceived him in his person, *in his style*" (italics added).
20. Steven Crowell's comment on the shorter version of this chapter at the 1996 Husserl Circle meeting.
21. For a more detailed clarification of a *transcedental clue*, see pages 244–45.
22. Indeed, on the one hand, Mary is reminiscent of Chalmers's conscious thermostat (Chalmers 1996), and on the other hand, reminiscent of his equivocation concerning the need for a veritable biological tethering of consciousness. While he states at the beginning of his book that "we would like the theory [of consciousness] to enable us to see consciousness as an integral part of the natural world" (1996: 5), he is quite content to claim some 290 pages later that "the fact that a thermostat is not made up of *biological* components makes no difference, in principle" (1996: 296).
23. Lesser but still critical problems afflict the thought experiment in this respect. Were the thought experiment a truly credible thought experiment and Mary herself a truly credible person, then both Mary's food and Mary's toilet eliminations would have to be taken into account and accommodated in some way. Both otherwise present problems with respect to Mary's being kept in a putatively all black-and-white world. Fruits and vegetables, for example, come in a wide variety of colors; toilet eliminations are yellow and brown. Moreover if Mary is a normal woman, then in spite of her confinement, she menstruates. Hence, however black-and-white her room, books, and television screen, the philosophically favored and much-discussed color red is something Mary cannot avoid experiencing, unless, of course, she is fitted with some kind of glasses which she is instructed never to remove and which turn all colors into either black or white.

SECTION II

METHODOLOGY