Kinesthetic Sense and Dynamically Embodied Action

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The familiar Western taxonomy of the five senses, in which vision is accorded pride of place as "the noblest of the senses," has a venerable history going back to Plato and Aristotle. As several scholars have noted (e.g. Classen 1993, 1997, Herzfeld 2001, Howes 1991, Ingold 2000, Seremetakis 1994, Stoller 1989) vision is closely followed by hearing, both of which are deemed superior to the lower, more animalistic "contact" senses of touch, taste and smell. This hierarchy was readily mapped onto 19th century evolutionism in both popular and scholarly thinking in the West as the racist tendencies of an earlier anthropology associated the "lower" senses with the "lower" races (Herzfeld 2001). While sight, and to a lesser extent hearing, were deemed the prominent senses of "civilized" westerners, smell, taste, and touch were assumed to predominate among "primitive" races. For example, the early 19th century, pre-Darwinian natural historian and embryologist Lorenz Oken mapped this sensory hierarchy onto the conventional racist ordering of human groups in a 'taxonomy by fives' as follows (Gould 1985: 204-5):

- 1. The skin-man is the black, African
- 2. The tongue-man is the brown, Australian-Malaysian
- 3. The nose-man is the red, American
- 4. The ear-man is the yellow, Asiatic-Mongolian
- 5. The eye-man is the white, European

All Animals		Mammals		Advanced Mammals		Humans	
Feeling	Invertebrates	Feeling	rodents	Feeling	cats & dogs	Feeling	African
Taste	Fishes	Taste	sloths & marsupials	Taste	seals	Taste	Australasian-Malayan
Smell	Reptiles	Smell	bats & insectivores	Smell	bears	Smell	American
Hearing	Birds	Hearing	whales & hoofed mammals	Hearing	apes	Hearing	Asiatic-Mongolian
Sight	Mammals	Sight	carnivores & primates	Sight	humans	Sight	European

Kinesthesia

Notably absent from this conventional taxonomy, however, is kinesthesia, our sensory awareness of the position and movement of the body. I ask the reader to please close your eyes and lift your arm—move it around and ask yourself how you know where your arm is located? This is kinesthesia; literally 'movement' (kinetic) + 'sensitivity' (aesthesia). It is this kinesthetic sense that provides information on the whole repertory of our motor actions, from the raising of an arm, to walking, even to the turn of the eyeballs and swallowing. Physiologically speaking, (that is, in the discourse of Western natural sciences) kinesthetic sensations are registered by receptors in the muscles, tendons and joints of the body. As the muscles function when we move bodily parts, various patterns of pressures on these receptors provide essential information for the guiding of motor action.

The perception of spatial movement and orientation of the body as a whole also involves a fluid filled receptor system located in the vestibules of the inner ear. More than balance, this structure provides the means by which we are aware of being tilted, shaken, or whirled about, and how, most of the time, we know "which way is up"!

The exclusion of kinesthesia from the Western taxonomy of the senses—this (ab)sense, as it were—is particularly interesting because scholars of perception as diverse as Descartes, Dewey, Gibson and Merleau-Ponty all acknowledge body movement as the unexamined ground of *all* sensory perception. One is led to ask why, then, has kinesthesia been excluded from consideration?

Theories of Perception

If the senses are the means by which we experience the world, then any theory of the senses assumes a theory of perception by means of which such experience is possible. The classical two-stage representational theory of perception—for example, that of Descartes—contains a foundational but unexamined assumption that perception is built out of sensations (Harré 1986: 147). In the first stage, a causal relation is supposed to obtain between a world-state and a sensation. In the second stage, the sensation is reworked in some cognitive process to yield the percept—a mental awareness. This representational tradition thus institutionalizes the separation of inside/outside, mind/body, and reason/feeling. Harré concludes that foundational to four centuries of perception theory is the notion that "percepts are cognitively transformed sensations and the basis of perception is an awareness of states of the brain that are the remote effects of physical causes" (Harré 1986:155).

In contrast, James Gibson (1966, 1979) provides us with an anti-Cartesian ecological approach to perception. As Tim Ingold has succinctly summarized, Gibson argues that instead of

...thinking of perception as the computational activity of a mind within a body we should think of it as the exploratory activity of the whole organism within its environmental setting in active participation through practical bodily engagement. As such it does not yield images or representations. It rather guides the organism along in the furtherance of its project. The perceptually astute

organism is one whose movements are closely tuned and ever responsive to environmental perturbations. (Ingold 2000: 260)

Such a conception situates bodily action at the heart of our being-in-the-world rather than merely a means to mental representations of the world.

Merleau-Ponty's position accords with Gibson's in many respects, but Merleau-Ponty takes this one step further back by positing our immersion in a pre-objectively given life-world that is ontologically prior to perceiving objects in the environment. As Ingold so aptly puts it, "...the world of our experience is a world suspended in movement that is continually coming into being as we—through our own movement—contribute to its formation" (Ingold 2000: 242).

Despite this common acknowledgement of body movement as the ground for the very possibility of experience, however, it remains largely unexamined and any discussion of bodily movement in and of itself as a sensory modality, and therefore as a potential resource for meaning-making (semiosis) is absent. Perhaps, as beings "...continually on the move actively exploring the environment in the practical pursuit of [our] life in the world," (Ingold 2000: 261) our own bodily movement has become an unexamined *common-sense*; its very familiarity conspiring to hide it from us analytically. More than this, however, I suggest that its omission stems from meta-theoretical problems with a viable concept of embodied personhood as *dynamically embodied*.

It is now somewhat commonplace to note that the investigation of the concept of "person" in Occidental philosophy has been enormously influenced by the mind/body problem that emerged from Descartes' privileging of private over public knowledge (Harré 2000). Problems that stem from the Cartesian legacy, however, continue to arise in current attempts to embody anthropological theory and practice. This is especially so when addressing the senses. For example, during a recent discussion of the responses a person might have to viewing a powerful work of art or a museum exhibit, an anthropological colleague considered it unproblematic to say that the emotional charge of such objects operates "presemiosis." "Objects," she said, "cannot be reduced to what they can be said to signify—to do so is a semiotic reduction." This statement reflects Michael Jackson's (1983) position in which he rejects semiotic processes as necessarily representational, (formally) cognitive, and linguistic, in favor of a phenomenologically inspired radical empiricism wherein sensory experience and perception are thought to afford a pre- or non-linguistic, pre-cultural mode of experiencing the world.2 Such a formulation does not transcend the problem of Cartesian body/mind dualism, however, it merely entrenches the bifurcation, by swinging the pendulum over to 'the body' (see Farnell 1994, Varela 1994, 1995).

Thomas Csordas (1990) moderates Jackson's position with the important corrective that Merleau Ponty's concept of 'pre-objective' does not mean 'pre-cultural' or 'pre-linguistic', but rather 'pre-reflective'—not thought about. In Gilbert Ryle's (1949) terms this would be "knowing how" rather than "knowing that." However, Csordas likewise limits the concept of semiotic to representational signs and symbols, which, he maintains, reduces embodied

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experience to language, or discourse, or representation (Csordas 1990:183). He proposes that we embrace Merleau-Ponty's pre-objective being-in-the world as a dialogical partner to representation: "The equation is that semiotics gives us textuality in order to understand representation, phenomenology gives us embodiment in order to understand being-in-the-world" (1999:184). In so doing Csordas seems to accept the dualism on which the separation of a representational mind from an experiential body is predicated. Csordas's work thus remains rooted in the spirit of the Cartesian tradition, although that is certainly not his intent.

In a similar vein, Johannes Birringer, in his book Performance on the Edge, (2000) says of a powerful performance, "we find [it] impossible to grasp, except emotionally, viscerally as it sometimes happens when we witness a powerful performance we don't understand but for its bodily and affective impact on us." Birringer thus restricts what we might mean by "understanding" to one type only—to the self-conscious, theoretical articulations of a propositional kind of which we, as language-using creatures, are capable—again, Ryle's "knowing that." "Knowing how" surely involves knowing how to respond emotionally. This capitulation to the old logical positivist strictures around what will count as 'knowledge', 'understanding', or, as in the previous example, 'meaning', unwittingly perpetuates mind/body dualism by privileging its second half. In this paper, I will try to show that these contributions fail to articulate an adequate concept of embodied personhood for anthropology because they presuppose impoverished notions of semiosis and language. At the heart of the problem, I suggest, is limiting the concept of 'sign' (and therefore semiosis) to the representational, that is, as "standing for" something outside of itself.³

My proposed solution to the problem of whether sensory modalities operate prior to, or separate from, semiotic meaning-making is simply to dispense with the dichotomy and the concept of personhood upon which it is predicated. Instead of restricting semiosis to representational signs and symbols, I propose a multi-sensory semiosis loosely defined as processes of agentic embodied meaning-making afforded by the modalities of taste, hearing, touch, pain, smell, sight, and kinesthesia in various relationships with talk and other bodily action. The post-Cartesian move is to view such somato-sensory semiotic modalities as providing human beings with resources for meaningful action that frequently elide spoken expression, but which are never separate from the nature, powers and capacities of linguistically capable agents (Farnell 1999). In addition to an anti-Cartesian theory of perception mentioned earlier, this move requires an updated and enriched non-representational view of language and semiosis, together with a concept of 'sensory act'.

A Wittgensteinian Move

In contemporary linguistic anthropology, the non-representational view of language articulated by the later Wittgenstein, in addition to the ethnography of speaking and discourse centered approaches to culture (see Farnell and Graham 1996), have developed or considerably modified concepts of language that gave rise to Peircian and Saussurian semiotics. An important development in this line of inquiry was to separate what Silverstein (1976)

called the "semantico-referential" function of speech—the naming function—from a "representational" theory of language in the sense of inferring accompanying mental representations or images. Current work in semiotically informed linguistic anthropology recognizes that the semanticoreferential function of vocal signs is only one among many. The same is true of signs in other modalities such as Williams' "action signs" (1975, 2003). We can thereby relieve 'meaning' from being fixed to a semantico-referential function (i.e. symbols that name or stand for something) and add creative and presupposed indexical aspects of sign functions into the analytic frame (See Urciuoli 1995, 1996). A contemporary approach to a sensory semiosis would also find meaning in 'contexts of use' and dialogic recontextualization (see Duranti and Goodwin 1996). This allows the kinds of practical activities of special interest to Bourdieu, for example, to be included in the realm of 'the joint construction of social action as signifying acts or embodied discursive practices.

Let us take ordinary walking as an example. The mundane activity of walking is not an action sign that "stands for" anything outside of itself—it does not normally carry semantico-referential meaning. But that does not make it meaningless. To argue in a behaviouristic manner that "I'm just walking, it doesn't mean anything" is to decontextualize the act, and reduce action to gross physical movement (Best 1978). I may be walking across the road to the post office, or on my way home, or walking for exercise, or for the sheer joy of walking in the afternoon sunshine (because be-ing matters—it is a human value). All these actions are semiotic in the sense of being meaningful, intelligent activities (Ingold 1993). Walking as an 'action sign' thus takes its meaning from the social and physical context in which the walking occurs, from its place within a system of signs, to stretch the Saussurian analogy. Action signs, like vocal signs also take part in deictic (space/time) reference, indexicality and performativity. These are, in turn, embedded within larger performance spaces of all kinds (e.g. living spaces, village plazas, courtrooms, etc.). They are also related in numerous ways and at several levels to other action signs.⁴

My walking may also carry indexical meaning—the way I am walking may index my gender, or class, or ethnicity. Since styles of walking are shaped socially, as Mauss (1935) observed, others can use the way I walk to position me socially, as I can use it to position myself.⁵ Although walking is normally outside one's focal awareness it is always available for focal attention if necessary. In Northern Ireland, for example, careful reading of the walk, posture, eye gaze and clothing of other persons (a practice called "telling") determines whether a person is identified as Catholic or Protestant and therefore evaluated as someone worthy of "talk" (i.e. social interaction), or not. In this tension-ridden context, attention to ways of walking and accompanying bodily practices has become important, as Bill Kelleher has noted (2003). When social borders of any kind must be crossed, it seems that habitual actions take center stage instead of remaining out of awareness. I maintain that this kind of re-conceptualization of semiosis can usefully apply to signifying acts in modalities other than speech, without reducing embodied

experience to propositional language or ignoring pre-reflective aspects of "knowing how."

The Wittgensteinian philosopher of human movement David Best reminds us how readily we fall into Cartesian traps in our discourse when he says, "to describe an action as thoughtful is not to say that the physical behavior is accompanied or preceded by an inner mental event: it is to describe the kind of action it is" (1992: 201). Active engagement in any activity is thinking, which is not to say that one cannot also be reflective and think about the activity when one is not engaged in it.

Likewise, to describe a sensory experience as meaningful is not to say that the physical sensory response is accompanied by an inner mental event or external signified that is its significance, it is to describe the kind of sensory experience it is. Active engagement in sensory experience is meaningful. The signifying here is not some semantico-referential meaning outside of the sensory act, it is meaningful because it is understood at some level, and therefore a semiosis—a meaning-making process—is at work. Sensory acts make sense without necessarily being thought about—i.e., engaging in reflective, abstract, critical, propositional, or theoretical thought.

This formulation retains the spirit of Merleau Ponty's "preobjective," without getting tangled in problematic subject/object talk. This is not to say that one cannot also be reflective and think about the meaning of sensory experience either at the time or later. It is also worth remembering that in the midst of social interaction, spoken discourse too is most often used without thinking about it.

Gibson and Merleau-Ponty's statement that "my gaze, my touch and all my other senses are together the powers of one and the same body integrated into one and the same action" (1962). He spoke of the bodily synergy of the senses in their convergent striving towards a common goal. It would be a mistake then, to separate kinesthesia as a sensory experiential 'feeling of doing', from bodily movement as physical action, for how can one act purposefully without experiencing the position of one's body parts and the dynamic feeling of doing that informs and assigns meaning to the action? "Knowing how" to engage in action requires skills that may be out of focal awareness, once learned.

For example, when learning a new phrase of danced movement from an Egyptian dance I am studying, I might ask the teacher to "explain" how to perform a subtle hip action that I have observed and tried to perform but cannot yet reproduce accurately. This distinct action sign has no name in this dance tradition. My teacher says, "It goes like this," as she repeats the action more slowly and carefully, adding "see, its this [pointing gesture] part of your hip leading —yaam da da, yaam da da," and the syllables create a rhythm that echoes the dynamics and timing of the action as she performs it again before I try once more. My point here is that there are very few spoken language concepts involved here, but what is going on is not pre-conceptual, prelinguistic, pre-reflective or "representational" Why? Because I have had to

focus my attention (my kinesthetic awareness, not my eyes) on the front side of my hip and learn to carve a shape in the space surrounding it with that part of the hip. I've had to "draw" two horizontal circles clockwise in space. However confusing the process may sound in words, this is a person acting, not a mind thinking while the body experiences, and this point cannot be overstressed (Farnell 1996:318). Once learned, my performance of the action no longer requires my focal awareness.

Several forms of sensory awareness are interwoven in any action. Digging, for example, requires perception of things in the environment—seeing and touching the spade one is picking up in order to dig. There is kinesthetic awareness of one's body and bodily movement in one's conscious action of picking up the spade. This is most likely to be an out-of-focal awareness of one's acting because attention will probably be focused on where and how one is going to act with the spade, i.e. on the soil. An experienced gardener may also pay attention to the smell, color, texture and even taste of the soil. Also required is a cultural understanding of the activity of digging and some learned skill. For example, Mauss observed that during the first World War, English troops did not know how to use French spades, a fact requiring 8000 spades to be changed whenever the French troops were relieved, and vice versa! These multi-sensory forms of awareness, typical of all skilled action, cannot be reduced to the others, whether reducing action to cognition or cognition to action or "experience," and none is foundational for the others (Woodruff-Smith 1988: 51-2).

An Ethnographic Case: Cashinahua Concept of Person

A brief summary of Kensinger's (1991) ethnographic account of Cashinahua (Peru/Western Brazil) personhood and knowledge, provides an example of an alternative taxonomy of the senses and embodied personhood that helps stretch the Western imagination as to how an agent-centered, sensory semiosis might operate as dynamically embodied action in a non-Cartesian environment.

Kensinger embarked upon an ethnographic quest into what counted as "knowledge" among the Cashinahuas—its location, constitution and acquisition. A wise man, he learned, has knowledge (una) throughout his body — "his whole body knows," they say. Una is that which one's body learns from experience. When asked where specifically a wise man had knowledge, Kensinger's consultants listed his hands, his skin, his eyes, his ears, his genitals, and his liver. When asked, "does his brain have knowledge," they responded "It doesn't."

Hand Knowledge

All knowledge associated with physical labor is located in the hands because they are the body part most directly involved in work. Kensinger explains: "...when a man chops down a tree to clear a garden in the forest, he learns something about the nature of the tree and of his tool, about the force needed to make the cuts and the direction in which the tree falls with reference to the placement of the cut and about whether it falls cleanly to the ground with reference to the surrounding brush and trees, and more." (Kensinger 1991:39)

This knowledge resides in the hands, say the Cashinahua, because they held the axe that cut the tree, causing it to fall and thus are the conduit by which the knowledge entered the body.

Knowledge learned by and associated with men's hands involves hunting, fishing, making gardens tools, bows and arrows, feather headdresses and other objects. Women's hands know planting and harvesting gardens, cooking, weaving, and making baskets, pottery and other objects.

Skin Knowledge

Besides hand knowledge, successful hunting also involves knowledge of the behavioral characteristics of the animals hunted based on observation. Contrary to our expectations, this is classified by the Cashinahua as "skin knowledge," as is all knowledge of the natural world. One learns about things like sun, wind, water, and rain through the sensations they produce on the surfaces of the body. It is in this sense that knowledge of the natural world is skin knowledge.

When Kensinger asked why knowledge of animal behavior was not eye knowledge, since it came from observation, he was told that it was knowledge of the jungle's "body spirit" (yuda bake yushin). This opened up a whole second classificatory system that constitutes the Cashinahua notion of person, according to which, every human being consists of a body (yuda), plus a series of at least five spirits. Although Kensinger's consultants disagreed on exactly how many spirits a person has, they all listed at least the following:

Yuda bake yushin—body child spirit
Bedu yushin—eye spirit
Nama yushin—dream spirit
Pui yushin—faeces spirit
Isun yushin—urine spirit

Kensinger discusses only the first two in his account. We learn that the "body child spirit" encases a person's body like an outer skin. It is not really visible—it consists of a person's aura, an indicator of the state of a person's vitality and health, or lack thereof, and a person's sheer physical presence. Although ephemeral, intangible and invisible, the body takes on a different aura in the absence of the body-child-spirit, as when a person dies. Yuda bake yushin also refers to a person's reflection in water or a mirror, as well as a person's shadow. All living things, including people, animals, vegetation and all other aspects of nature are said to have "body spirits." When one sees a person or thing one can be said to see its body spirit.

Eye Spirit –Eye knowledge

To see the true nature of people and the things that make up the natural world, however, one must also understand the *bedu yushin*—eye spirit, sometimes also called the "real spirit" (*yushin kuin*). The eye spirit dwells in a person's eye, leaving the body during unconsciousness and hallucinogenic

experiences to travel in the world of spirits. The knowledge gained in these travels is called *bedu unaya*—eye knowledge. It is only with the eye spirit that one can truly and fully see persons or objects in both their physical and spiritual substances, i.e. their bodies and body spirits. Without the eye spirit a person can only know the surface of things, i.e. their skin and thus skin knowledge.

Ear Knowledge

Social knowledge is gained though and resides in the ears, a connection which comes from the centrality of language in social discourse. Although speech (hancha) comes from the mouth, knowledge comes from hearing. There are two kinds of hearing, soft and hard. Soft hearing involves listening and absorbing facts about social matters—social awareness. Hard hearing requires digging beneath the surface to consider motivations, consequences etc. Although both kinds of hearing involve knowledge, it is principally hard hearing that is involved when they say a person knows a lot or that they have much ear knowledge. Hard hearing results from both listening and thinking. Social misfits and persons who flaunt social conventions are said to be "deaf "or to "have hard ears" or "his ears are without holes"—they are people without ear knowledge.

Kensinger was never able to find out where thinking takes place. Several people said it takes place within the ears, others located it in the heart, the liver or the whole body. Others found his questions incomprehensible or silly. Although he pressed the question, his informants consistently rejected the brain (mapu) or the place between the ears as the locus of thought.

Genital knowledge

For the Cashinahua, the genitals are the locus of knowledge of mortality and immortality, of the life force. The sexual act is brief and fleeting, they explain, but through it one reproduces oneself. Children are the product of the genitals and genital activity and give one immortality by enduring beyond one's own lifetime.

Liver knowledge

The liver provides knowledge of emotions. It is considered the locus of feeling joy, sorrow, fear, distrust, hope, and pleasure. A generous pleasant person has a "sweet liver" or "his/her liver knows a lot"; a stingy person with a nasty disposition who always is gloomy and foresees disaster has a "bitter liver." A person with a bitter liver only knows a little. Liver knowledge is expressed in behavior and demeanor on the surface of the body. A happy disposition produces a "sweet face"; a grumpy disposition, a "bitter face". One can say of a person "her liver has a lot of knowledge. Her face is very sweet, Her whole body is very sweet, it always makes us very happy."

Cashinahua consultants consistently rejected any separation of mind and body. They insisted instead, that different kinds of knowledge are gained through, and reside in, different parts of the body. In sum, a wise person is one who has a lot of *una* (knowledge): their hands know (they are skilled workers); their skin knows (they have an extensive and intimate knowledge of their physical surroundings). Their eyes give them knowledge of the

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spiritual world. Knowledge of their mortality and immortality resides in their genitals. Their liver provides them with the full range of emotions. A truly knowledgeable person is one whose whole body knows. Knowledge is derived from activity and in turn generates activity. It is in action not contemplation that knowledge is both gained and given expression. A wise Cashinahuan person is not only one who knows based on past experience, but one whose knowledge continues to increase as it is put into action. Knowledge is alive—it lives and grows in a body that acts, thinks, and feels.

Concluding Remarks

The social sphere is most often multi-sensory and predicated upon dynamic embodiment, that is, body movement as both speech and action that are enacted forms of knowledge and understanding. As I have written elsewhere, "Such dynamically embodied signifying acts in symbolically rich spaces are the dialogical inter-subjective means by which persons, social institutions and cultural knowledge are socially constructed, historically transmitted and revised and so are constitutive of culture and self" (Farnell and Graham 1998:411). Again, the signifying here is not some semantico-referential meaning outside of the act, it is meaningful because it is understood, and therefore a semiosis is at work.

This paper begins and ends with reference to contrasting taxonomies of the bodily senses and personhood in order to draw attention to the fact that our actions and experiences are shaped by such socially constructed, often normative, pre-theoretical assumptions. To include them in analyses is not to fall into the trap of separating "ideas" from "action" but to recognize the interdependence between "knowing how" and "knowing that."

Endnotes

¹ The chart shows four cycles of five-part sensory wheels. Gould notes that Oken supplied "forced and specious arguments for these fanciful correspondences....These identifications with sense organs and specification of five part wheels at all scales throughout nature did not represent an artificial system constructed to aid memory or facilitate recall, but a discovery of nature's underlying reality." (Gould 1985: 204-5).

² The problem is, if there is a way of knowing that is pre-cultural, and pre-linguistic that is somehow provided by the body in some sense, what could be the mechanism or mechanisms by which it is accomplished? Unless one resorts to some form of instinctivism or genetic determinism, what biological mediator is conceivable? The only logical next step is back to a Cartesian formulation of mind as a non-material entity because such a formulation would have to bypass the central nervous system that mediates all sensory experience.

³ Although the Peircian definition of a sign as standing for something is indeed problematic, the Saussurian unified signifier/signified does not (at least not necessarily, although it has frequently been interpreted as such) since Saussure's concept of semiology as a science of the functioning of signs in society stresses that a sign takes its meaning from its place within a system of signs, thus opening the door to a non-representational reading of meaning, and a focus on indexical properties as well as non-propositional sign systems.

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⁴ See Williams's semasiological concept of the "Nesting Principle" (2003: chapter 7).

⁵ On Positioning theory, see Davies and Harré (1990) and, Harré and Van Langenhow (1999).

⁶ I find the concept of "pre-objective" problematic because it employs the dualistic discourse of inside/outside, public/private when Merleau-Ponty embraces Heidegger's notion of being-in-the-world that transcends this.

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