

The Body Comes All the Way Up

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I. TWO EXPRESSIONS OF ELIMINATIVE MATERIALISM

ELMINATIVE MATERIALISM, broadly construed, is the thesis that our common-sense intentional idiom could be wholly replaced by a non-intentional idiom without thereby impoverishing our ability to explain human behavior or intelligence. There are (at least) two fundamental expressions of eliminative materialism: one is founded upon nominalism and makes the plasticity of the mind and the radical *contingency* of the folk psychological idiom central features in its case for eliminativism; the other is founded upon scientific realism and makes the plasticity of the mind and the empirical *falsity* of folk psychology central to its eliminativist proposal. Both, of course, share certain commitments, but the overall import of each differs drastically.

Michael Polanyi never explicitly dealt with eliminative materialism. Reductionist accounts of mind were his usual concern. His writings, however, make it abundantly clear that he would have rejected eliminativist conclusions about the mind. In fact, a very compelling case against eliminativism is derivable from Polanyi's conception of the place of the *body* in the development of a human mind.

My aim is to formulate a Polanyian response to eliminativist materialism. While Polanyi's account of mind presupposes a certain degree of mind's plasticity, his understanding of the body's role in the emergence of mind actually calls into question the eliminativist claims about either the contingency or falsity of folk psychological idioms. On Polanyi's account, folk psychology's mentalistic vocabulary, intentional narrative structure, and intensional semantics, reflect, or rather *express*, the irreducibly teleological behavior of the corporeal form of life that evolved the folk psychological idioms in the first place.

Before we explore a Polanyian response to eliminativist claims, however, we need to gain a better understanding of both types of eliminative theses mentioned above.

II. PLASTICITY AND CONTINGENCY

We begin with Richard Rorty. From Sellars' magisterial debunking of empiricism's "Myth of the Given,"¹ Rorty derived a rather radical conclusion: If all we ever have awareness of are entities under some *theoretical* description, then there

¹"Empiricism and the Philosophy of Mind," in H. Feigl and M. Scriven, eds., *Minnesota Studies in the Philosophy of Science*, Vol. 1 (Minneapolis: Univ. of Minnesota Press, 1956), p. 299.

is no independent *nature* or fundamental *essence* to anything we may have awareness of, or come to know about. That is, what we come to know is *always* a function of the embedded theories underwriting the language(s) through which our perceptual and introspective awareness is structured and organized. Consequently, Rorty argues that finding the true nature of "X" is merely a matter of "finding the most useful way to talk about things which have traditionally been called 'X.'" ²

He adopts a pragmatic nominalist view that posits language as ubiquitous: "there is no such thing as comparing a linguistic formulation with a bit of non-linguistic knowledge, but only a matter of seeing how various linguistic items fit together with other linguistic items and with the purposes for which language as a whole is used" (CPM 344). There just is no "pre-linguistic item of awareness to which language must be adequate."³ Language, for Rorty, goes *all the way down*. No entity of which we have awareness has an extra-linguistic essence or independent nature that our language latches onto, represents, expresses, or uncovers. We do not first have an intuitive awareness of something and then seek a linguistic expression adequate to it. Rather, what we have awareness of is "a function of the language we use" (IDEM 227). And since speaking a language is not something we can divest ourselves of while retaining the ability to think, Rorty insists that we cannot temporarily shed our language to gain a neutral vantage point from which to judge our language's relative adequacy to any non-linguistic reality it might be purported to represent or express. Thus, the only "facts of the matter" to which a language must be adequate are its own linguistic "arti-facts." There just is no getting beneath language to something non-linguistic. We are suspended in language.⁴

A rather important result of Rorty's ubiquity thesis is the radical contingency it confers on *all* languages. Since nothing whatsoever has an intrinsic or extra-linguistic nature, no language has a privileged status in regard to any domain of phenomena; every domain of phenomena is linguistically constructed and therefore *artificial*. In this radically nominalist context, the very notion of a *natural* language is meaningless. There just are no natures either to the producers and users of language, or to the objects of which language speaks. Therefore, there is no possibility of a *naturally* evolved language that *naturally* gives expression to human nature, or *naturally* represents the essences of objects. On Rorty's view, languages are *not* mediums of reality representation, but *tools* for personal and social adjustment. So the relevant issue Rorty seeks to settle concerns not whether the folk psychology idiom accurately expresses human nature or represents the kinematics of human cognition, but folk psychology's relative utility, i.e., how *efficiently* does it accomplish *our* aims (CPM 336). To accept the claim that there is no standpoint outside of our language from which to judge our language is to give up the idea that there are *reasons* grounded in nature for using one language rather than another.⁵

²"Contemporary Philosophy of Mind," *Synthese* 53 (1982), 339; hereafter CPM.

³"In Defence of Eliminative Materialism," in David M. Rosenthal, ed., *Materialism and the Mind-Body Problem* (Englewood Cliffs, NJ: Prentice Hall, Inc., 1971), p. 231. First published in *The Review of Metaphysics* 19 (Sept. 1965); hereafter IDEM.

⁴"Comment on Dennett," *Synthese* 53 (1982), 187; hereafter CD.

⁵*Contingency, irony, and solidarity* (Cambridge: Cambridge Univ. Press, 1989), p. 48; hereafter CIS.

Rorty's pragmatic nominalism leads him to view *all* languages as radically contingent. What language we choose to use is not an epistemological or ontological issue, but merely a matter of linguistic convenience. Outside the context of human pragmatics, all languages are equally arbitrary. And, because there is no chance that any language will leave some non-linguistic entity unremarked, silently existing behind the chatter of its users, no language is epistemologically more explanatory or ontologically more capacious than any other. All languages are intrinsically equal. But some languages serve *our* purposes better than others. While every language generates its own ontology and funds its own explanations, it is up to us to determine which languages are best suited to order particular domains of human practices. So we are free to shift languages "for the sake of convenience" (CD 186). If we are convinced that the scientist should be the "vanguard of the species," we are utterly free to conceive of ourselves under the descriptions of a scientific language, to configure our self-interpretations in its vocabulary. But if, on the other hand, we are persuaded that the poet holds the key to coping in life, then her intentional and creative descriptions will be our preferred tools of self-description.⁶ In short, what language we use is entirely up to us.

Rorty's conviction that language "goes all the way down" applies not just to third-person items of awareness, but to first-person loci of awareness also. Here we encounter the thesis of the mind's *plasticity*.

A language neither expresses nor represents the self or person who uses it; rather, a language dialectically *creates* the emerging self who uses it (CIS 7). Man is, according to Rorty, "a self-changing being, *capable of remaking himself by remaking his speech.*"⁷ Therefore, to change how we talk is to change what we are (CIS 20). Persons, for Rorty, are merely incarnated vocabularies (CIS 80). And since there is no extra-linguistic and pre-existent human nature or essence of selfhood, one's choice of language is tantamount to one's choice of self. The recognition of the *plasticity of mind* and the *ultimate arbitrariness of all languages* destroys metaphysical seriousness about finding the *right* Ur-language in which to describe ourselves or the world: no more worry about identifying and accurately expressing reality's *one and only true* laden-list. When the "power of language to make new and different things possible and important" is fully appreciated (CIS 39), metaphysical seriousness *about* languages and their uses will naturally deflate into a certain ironic playfulness *with* languages and their various uses (CIS 74). Since the world itself speaks no language, nor has it any preferred language of description, our ultimate role is that of cosmic ventriloquist. The world will speak any language we manipulate it to express. How could it refuse?

On Rorty's view, the idiom we use to describe ourselves is "up for grabs" (CIS 89); the folk psychology idiom is just another idiom of self-description among others (CD 185). It has no privileged status. If a certain idiom no longer services

⁶Rorty, however, has a bias towards scientific discourse when it comes to philosophy of mind; see John Furlong's article "Scientific Psychology as Hermeneutics? Rorty's Philosophy of Mind," *Philosophy and Phenomenological Research* 48 (1988), 490.

⁷"Epistemological Behaviorism and Analytical Philosophy," in *Hermeneutics and Praxis*, ed. Robert Hollinger (Notre Dame, IN: Univ. of Notre Dame Press, 1985).

us, we are free to replace it with a new idiom that better conduces to our present aims and allows us to say more of the things we want to say.

III. QUINE AND THE DOUBLE STANDARD

Rorty's rather cavalier dealings with folk psychology were anticipated (if not *inspired*) by Quine's doctrine of the double standard. According to Quine, the man-on-the-street expresses himself and represents others in an "essentially dramatic idiom."⁸ That is, he overlays human behavior with a rather baroque conceptual template, one that dramatizes mere sensory stimuli and bodily motions into irreducibly intentional phenomena. Intentional explanations and the propositional attitude ascriptions upon which they depend certainly make human lives more engaging and mysterious, but, of course, this is only to be expected from an idiom that embodies an implicit theory of final causality (WO 219).

Quine recognizes that he cannot "forswear the use of intentional idioms, or maintain that they are practically dispensable" (WO 221). So the way he deals with intentional idioms is to bracket them off from truly referential discourse—he advocates the way of "the double standard" (WO 216). That is, he accepts that there is no way of "breaking out of the intentional vocabulary" by reducing it to the non-intentional vocabulary of physical science, but unlike Brentano, he does not interpret this irreducibility as indicating "an autonomous science of intention" (WO 219). Rather, the irreducibility of the intentional idiom merely demonstrates the utter "baselessness of intentional idioms and the emptiness of a science of intention" (WO 221). Accordingly, when we move from the dramatic narratives of everyday life to the serious stuff of science's literal theories, i.e., from making practical social interpretations to "limning the true and ultimate structure of reality" (WO 221), we must shift to the canonical and austere discourse of physical science. Since the "dramatic idiom" is merely a *practical* necessity of daily life, Quine does not take its irreducibility to pose a serious threat to a *science* of human cognition or behavior.

Quine's doctrine of the double standard, therefore, translates into taking a nominalist perspective on intentional or folk psychology discourse and a realist stance toward the extensional discourse of physical science: the former being a kind of heuristic tool in the service of the latter. Rorty does not accept Quine's double standard, i.e., nominalism for folk psychology's "dramatic portrayal" and realism for science's "literal theory," but seeks to totalize nominalism over the whole of human discourse. Churchland, as we shall see, also rejects Quine's double standard. Churchland, however, takes Quine's standard of realism for scientific theory as the *only* legitimate standard—scientific realism, that is, must go it *alone*.

IV. PLASTICITY AND FALSITY

Churchland, like Rorty, is committed to the "radical plasticity of the human mind."⁹ But Churchland is also committed to the idea that "there exists a world,

⁸*Word & Object* (Cambridge, MA: MIT Press, 1960), p. 219; hereafter WO.

⁹*A Neurocomputational Perspective* (Cambridge, MA: MIT Press, 1989), p. 130; hereafter NP.

independent of our cognition, with which we interact, and of which we construct representations" (NP 151). That is, he, unlike Rorty, accepts what Davidson termed the "third dogma of empiricism," notably the dualism of conceptual scheme and empirical content.¹⁰

So, for Churchland, one's linguistic framework and one's ontology may come apart: one may be unwittingly committed to a non-existent mentalist ontology by virtue of one's linguistic-conceptual framework. Therefore, in regard to human cognition, it is a matter of metaphysical seriousness that Churchland finds a linguistic-conceptual framework that "unlike folk psychology, is at least *equal* to the kinematical and dynamical intricacies of the world within" (NP 75; emphasis mine). For Churchland, "the world within" has non-linguistic empirical content that our language *must*, if it is going to advance our knowledge, accurately represent.

According to Churchland, folk psychology is "a commonsense theory, an almost certainly *false theory*" about the kinematics of cognition and the causes of behavior (NP xvi). Given Churchland's scientific realism and his disparaging appraisal of folk psychology, it is only natural that he assumes there are vast amounts "of exploitable information, contained in our own sensations" going "blissfully unexploited" by us.¹¹ What else would one expect of the deliveries of folk psychology's "hopelessly primitive and deeply confused conception[s]"?¹² He elaborates: "Our current modes of conceptual exploitation are rooted, in substantial measure, not in the nature of our perceptual environment, nor in the innate features of our psychology, but rather in the structure and content of our common language . . ." (SRPM 7). In another place Churchland offers: "If the conceptual framework in which our perceptual responses to the world are habitually framed were to be replaced by a more accurate and penetrating conception of physical reality, then our newly-framed perceptual judgments could be significantly more revealing of the structural properties and the dynamical details of our perceptual environment" (NP 256).

The claim Churchland seems to be making is that our perceptual responses and judgments are rooted in our "modes of conceptual exploitation," and our "modes of conceptual exploitation" are limited almost exclusively by the common language we were brought up to use. Thus if we want to enhance our modes of perceptual and conceptual exploitation, we need merely to learn a different and more discriminating language, a language that does not embody categories and concepts rooted in pre-critical intuitions. This is, of course, true of *specific domains of experience*. For instance, if we want to heighten our perceptual sensitivities and conceptual appreciation of music, we learn a new and more discriminating language in which to configure our acoustical input, the language, say, of musical composition. But, as we shall see when we turn to Polanyi's thought, whether a similar move in regard to the *whole* intentional idiom of our first language is equally available is a much more controversial proposal.

Churchland conceives of our internal sensations on the model of external

¹⁰*Inquiries into Truth & Interpretation* (Oxford: Oxford Univ. Press, 1984), p. 189.

¹¹*Scientific Realism and the Plasticity of Mind* (Cambridge: Cambridge Univ. Press, 1979), p. 7; hereafter SRPM.

¹²*Matter and Consciousness*, rev. ed. (Cambridge, MA: MIT Press, 1988), p. 45; hereafter MC.

perception. He contends that our introspective awareness is a function of "the discriminations embodied in the psychological vocabulary of the language we learn" (NP 54). Thus, Churchland argues: "What we are now able to spontaneously report about our internal states and cognitive activities need not define the limit on what we might be able to report, spontaneously and accurately, if we were taught a more appropriate conceptual scheme in which to express our discriminations" (NP 74). That is, if we learned "to describe, conceive, and introspectively apprehend the teeming intricacies of our inner lives within the conceptual framework of a matured neuroscience" (NP 54), we could, in principle, *directly introspect* "various spiking frequencies in the *n*th layer of the occipital cortex," while others, those who have not surrendered the impoverished and largely fallacious conceptual framework of folk psychology, would introspect merely "a sensation-of-white" (NP 64).

Churchland is convinced that the plasticity of the human mind is so great that humankind could gain a *wholly new self-understanding*, and experience a *wholly new social reality*, if only it would jettison folk psychology and reconfigure its perceptual and introspective awareness in terms of the more discriminating artificial language of neuroscience. Once the "arbitrary protectionism" of folk psychology is given up, and folk psychology is "put aside in favor of [neuroscience's] descriptively more accurate and explanatorily more powerful portrayal of the reality within" (NP 125), our conceptual framework will be representatively adequate to "the truly real and genuinely important" features of cognition (NP 135). Our conceptual template will no longer lead us to experience the "chimerical ontology" of folk psychology (NP 125)—no more experiences of "entities" that do not reduce to members of our current scientific ontology. Clearly Churchland understands our modes of conceptual exploitation to spin radically free of our bodily make-up. That is, Churchland does not entertain the possibility that our intentional languages of self-description and social-interpretation might be privileged in virtue of their historical relation to the evolution of our bodily form of life. Rather, he argues that "[t]he network of principles and assumptions constitutive of our common-sense conceptual framework is as speculative and as *artificial* as any overtly theoretical framework" (SRPM 1-2, emphasis mine). Folk psychology is a speculative and artificial theory that has been embedded in human language for thousands of years. But its time has come, according to Churchland. Neuroscience has demonstrated folk psychology's ontology to be completely fallacious: "[b]eliefs and desires are of a piece with phlogiston, caloric and the alchemical essences" (NP 125). And without its ontology of "beliefs," "desires," "minds," etc., folk psychology's intentional attributions and explanations are empty (MC 47).

Contrary to the directives of Quine's doctrine of "the double standard," Churchland is not willing, when he is doing the serious work of science, merely to set folk psychology to one side. He will not be happy until folk psychology takes its place beside alchemy in the annals of defunct scientific theories. Since folk psychology is (according to Churchland) an isolable, speculative, and indeed artificial *theory* about the causes of human behavior and the kinematics of human cognition, it is not exempt from critical examination and possible replacement. If folk psychology resists reduction to the discourse of neuroscience, we must not continue using it, regardless of our feelings of intimacy towards it, because, in the

end, folk psychology will only stand in the way of Churchland's positivist goal, namely, the unity of science (NP xii).

In short, Churchland wants to replace folk psychology with a non-intentional successor idiom, one that will ultimately reduce to the extensionally-grounded theories, concepts, laws, and vocabulary of physical science (NP 1). If anthropological science is to progress, the intentional idiom of the man-on-the-street *must* be eliminated. This idiom has its roots in the animism of a dark past. Folk psychology, in Churchland's opinion, represents nothing more than the last stronghold of animism (SRPM 74-75). It is now time, Churchland proposes, for modern science to go *all* the way and to eliminate intentional anthropomorphisms *even* from its anthropology.¹³

V. POLANYI ON MAN'S PRE-SCIENTIFIC PERSPECTIVE

When we turn to Polanyi's view of our pre-scientific self-interpretations, we encounter a rather different evaluation of our common-sense idiom of self-description. Polanyi understood his post-critical philosophy to further Husserl's attempt to "safeguard the content of unsophisticated experience against the effects of a destructive analysis."¹⁴ "Destructive analysis" refers to that explicit detailing of measurable particulars characteristic of what he called "objectivism." Polanyi, along with Husserl, was convinced that everything of vital interest in human affairs could only dissolve under the disengaged "view from nowhere" presumed by objectivist science. Thus he sought to deconstruct the myth of objectivism by demonstrating that *all* realities, even those identified by the natural sciences, are known ultimately through the personal participation of human agents.¹⁵

But what does Polanyi mean by the expression "content of unsophisticated experience"? Throughout his writings, Polanyi emphasizes that man's "pre-scientific" interests, skills, beliefs, and concepts provide the tacit background and matrix of significance for man's more abstract or scientific endeavors. Speaking of the quantificational methods of the various sciences, Polanyi comments that

the fundamental concepts of these sciences are drawn from everyday experience in which measurement plays no part. The existence of animals was not discovered by zoologists, nor that of plants by botanists. We learn to distinguish living beings from inanimate matter long before we study biology and we continue to use our original conception of life within biology. Psychologists must know *from ordinary experience* what intelligence is before they can devise tests for measuring it scientifically. (STSR 88, emphasis mine)

In another place, he contends that "science *must* accept to an important extent" the pre-scientific conceptions of life and human intelligence.¹⁶ In particular, he

¹³As Patricia Churchland says: "psychology has no more right to be anthropomorphic than any other science." "A Perspective on Mind-Brain Research," *Journal of Philosophy* 77 (1980), 207.

¹⁴In Marjorie Grene, ed., *Knowing and Being: Essays by Michael Polanyi* (Chicago: Univ. of Chicago Press, 1969), p. 221; hereafter KB.

¹⁵In Fred Schwartz, ed., *Scientific Thought and Social Reality: Essays by Michael Polanyi* (New York: International Universities Press, 1974), p. 88; hereafter STSR.

¹⁶*Personal Knowledge* (Chicago: Univ. of Chicago Press, 1958), p. 139, emphasis mine; hereafter PK.

argues that should psychologists become preoccupied with "something that *ordinary experience* does not recognize as intelligence, they would be constructing a *new subject matter* which could no longer claim the intrinsic interest attached to [the subject-matter] they originally chose to study" (PK 139, emphasis mine). So, for instance, neurophysiology *cannot* be said to account for thinking unless it represents it as something in which our pre-scientific conception of thought is still recognizable (PK 339).

Polanyi accepts that scientific studies can, and sometimes do, locally rectify our everyday conceptions of the world and ourselves (PK 161). But he rejects that the objectifying methods of science should be totalized. He recognizes that objectification has a circumscribed utility, but holds that objectification is only a moment in our overall approach to things (STSR 89).

It seems that the *anthropological dimension* of what Polanyi calls "the content of unsophisticated experience" answers quite well to the much maligned "folk psychology" of the eliminativists. For Polanyi, however, folk psychology is *not a local and isolable empirical theory*, but rather the *pre-scientific anthropological content expressed in the everyday discourse of natural languages*.¹⁷ On Polanyi's account, folk psychology embodies the *pre-theoretical* anthropology of the human lifeworld. So the idea that the intentional idiom of folk psychology might be eliminated wholesale, not merely altered, would be ludicrous to Polanyi. Clearly then, Polanyi would reject both forms of eliminativism discussed above.

VI. POLANYI ON THE EMERGENCE OF MIND

According to Polanyi, the human mind emerges from two fundamental *givens*: a human body and a human language. Neither of these is chosen. Yet both determine, to a large extent, man's limitations and opportunities in the world.

"Our body and the organs in our body," Polanyi writes, "are *given* to us as our own by birth, and there can be no question of [indwelling] them in order to endow them with meaning" (KB 183-84, emphasis mine). Our body, we might say, is *uniquely given* to us, because it is not some *thing* we accept. Nor is it some *thing* we can possibly reject. Rather, it is the transcendental ground (in the Kantian sense) of our very possibility of accepting or rejecting any *thing* whatsoever.

Our *first* language is also *uniquely given* to us. We do not critically reflect upon the adequacy of our first language before deciding to use it. Rather, "we first acquire speech, [by] uncritically absorbing the idiom of our elders." That is: "We do not learn our mother tongue in preference to a hundred other living languages, as well as Esperanto, Ido, ancient Etruscan, and the language of the *Principia Mathematica*, after examining the vocabularies and grammars of each and testing their relative appropriateness. *We are born into a language . . .*" (STSR 75, emphasis mine).

Polanyi contends that the emergence of a human mind is a *biosocial achievement*, whereby a mother tongue is progressively embodied in a human body. Or,

¹⁷By "natural" languages, I mean such languages as English, French, Russian, etc., languages that are not artificially manufactured, but are learned as first languages within the community life of the world's various ethnic groups.

to put it slightly differently, a mind emerges when a young child's mute bodily passions (passions he shares with his mammalian ancestors) are gradually channeled through, and transfigured by, the network of social commitments and normative constraints embodied in, and mediated through, the linguistic framework of his mother tongue. A child's mind comes into existence, Polanyi claims, only when the child grasps "the meaning and use of language" (STSR 123). The child's natural bodily passions (appetitive, motoric, and perceptive drives) gain linguistic expression (and become mental passions) through the training and shaping imposed on them by a linguistic community.

"To use language," Polanyi submits, "is to extend our bodily equipment and become intelligent human beings." By pouring our mute bodily passions into the articulate framework of our mother tongue, we developed new discriminative faculties; "as each of us interiorizes our cultural heritage, he grows into a person seeing the world and experiencing life in terms of this outlook" (KB 148). Polanyi recognizes that bodily drives and passions "are refashioned and amplified into something new by words" (PK 194). As a child gradually indwells (internalizes) a mother tongue, his natural bodily teleology acquires a cultural dimension that is grounded in an intensional semantics; his natural bodily teleology gains an artificial conceptual content, where every thing is encountered *as* some thing (PK 173).¹⁸ That is, with his mother tongue, the child begins to encounter objects "under descriptions." The child adds to her visual memory a *verbal* memory, learns how to subsume impinging stimuli under various descriptions, and gains the skill of making sense of her experiences by re-describing them and weaving them into coherent narratives. Moreover, the child gains access to an explicit domain of possibility and counterfactuality. The child can now refer to her past, fear her future, tell lies, make her own desires and beliefs objects of her own (second-order) desires and beliefs, and even dread her own non-existence. A multitude of intellectual passions are kindled in a child when she assimilates the articulate framework of her culture, i.e., her mother tongue. "The inarticulate mental capacities developed *in our body* by the process of evolution," supply, according to Polanyi, "the tacit coefficients of articulate thought" (PK 389, emphasis mine).¹⁹

When we learn to indwell the articulate framework of our mother tongue, our merely egocentric bodily passions are transmuted into self-giving mental passions: "[Our] appetitive, motoric, and perceptive [skills are] transformed into an intelligent person, reasoning with universal intent" (PK 395). In short: "We come into

¹⁸It is interesting here to note that, on Polanyi's view, when a child learns a mother tongue, the intensionality of this natural language progressively confers on the child's native goal-directed bodily behaviors the capacity to subsume instances of its environment under various descriptions, thereby yielding the child a full-blown intentional way of being-in-the-world. Contrast this with the typical view of cognitive science, where this relation is reversed: the brain itself is conceived as "the original and true bearer of intentionality" that confers intentionality on language. See William Lyons, "Intentionality and Modern Philosophical Psychology, I," *Philosophical Psychology* 3 (1990), 266.

¹⁹As Drew Leder notes, the human body provides the corporeal "prearticulations upon which all cultures must build." *The Absent Body* (Chicago: Univ. of Chicago Press, 1990), p. 29. And Maxine Sheets-Johnstone contends that "there is an indissoluble bond between hominid thinking and hominid evolution, a bond cemented by the living body." *The Roots of Thinking* (Philadelphia: Temple Univ. Press, 1990), p. 4.

existence mentally by adding an articulate framework to our bodies. Human thought grows only within language and since language can exist only in society, all thought is rooted in society."²⁰

The two givens of body and language are brought together in a social setting where they eventually produce the human mind. Consequently, the human mind (what Churchland referred to as "our mode of conceptual exploitation") is constrained not merely from above by language, but also *from below* by the tacit roots that embody mind,²¹ namely, the body's natural repertoire of basic needs, sensitivities, impulses and desires. So, although Polanyi could agree with Rorty that language goes all the way down, he would balance this nominalism with the claim that *body comes all the way up*. The body is, for human life, a necessary enabling condition for the acquisition of language, and language does *not*, therefore, spin radically free from the body's natural constraints.

So our bodily being provides the tacit coefficient of our fundamental "mode of conceptual exploitation." Our bodily life is upgraded into human intelligence by language. Here Polanyi and Rorty would seem to agree. But against Rorty, Polanyi maintains that "the upgrading" does not come about by just *any* language. It must be a language ultimately constrained by the conditions of our embodiment, a language that captures those things that answer to our body's natural teleology, that repertoire of needs, drives, sensitivities, and vulnerabilities which emerged from the evolutionary interplay of hominid embodiment and environment (PK 99 and 322-23). Consequently, natural languages, languages that embody and express folk psychology, are the *only* languages that can upgrade our bodily teleology into a distinctly intentional form of life.

In this context, Polanyi's discussion of the emergence of natural language is highly instructive.

VII. POLANYI ON THE EMERGENCE OF LANGUAGE

All languages, whether artificial or natural, are *tools* of human intentions, tools that humans use to extend their native bodily grasp of the world. Although all our languages embody "our antecedent unformalized powers" (PK 131), only *natural* languages, languages that serve as mother tongues, emerged out of an intelligence more ancient than language itself: from a mute bodily intelligence (the intelligence developed in our body by the process of evolution) that pre-intentionally extended its grasp of, and orientation in, a potentially hazardous environment by generating a symbolic formalism upon which it could rely "as [an] external guide" (PK 131).

Our natural languages, therefore, embody and express an unsophisticated and pre-theoretical perspective on the world. When a child learns a mother tongue, this natural language is grafted onto his instinctive bodily behaviors and responses, and progressively penetrates and transforms his way of being in the world. This, of course, explains why children can learn *only* natural languages as their *first* language. Artificial languages are crafted in the heights of abstraction and therefore have no intrinsic appeal to, or direct connection with, a child's innate bodily behaviors and responses (KB 220). Consequently, artificial lan-

²⁰Mary H. Hall, "A Conversation with Michael Polanyi," *Psychology Today* (1968), 67.

²¹*Tacit Dimension* (Garden City, NY: Doubleday & Company, 1966), p. x.

guages can be learned only with the help of a natural language through which explicit instructions are communicated and into which the artificial languages are first translated.

Our bodily form of life supplies the minimal constraint on the *type* of language we can learn as our *first* language. We can learn only *intentional* languages as our first language. And *it is through indwelling our first language that we come to embody a mind*. No child could learn *as its first language*, the artificial languages of LISP, predicate calculus, or neuroscience. These languages were *intentionally* contrived, and *contrived* in abstraction from the concrete dialectic of human embodiment and environment behind the evolution of natural languages. They were contrived by using a natural (intentional) language as a meta-language. Their semantics is ultimately parasitic on a natural language; if one did not first speak a natural language, one could not learn these languages. They are too abstract, and consequently, could have no intrinsic appeal to the body's mute intellectual passions. Natural languages, in contrast, have natural ligaments stretching all the way back to the bodily intelligence that first evolved them.

An implication of this Polanyian view on the emergence of natural language is that learning a first language is, *in principle*, different from learning a second language. Learning a first language *brings into being* a mind; that is, through learning a first language, mute bodily intelligence gains articulate mental skills. Learning a second language, in contrast, merely *expands* an already established mode of conceptual exploitation. Our first language embodies the natural discriminations already forged by our body's evolutionary past; these natural discriminations supply the ineliminable tacit foundations of our explicit intelligence, of our mind.

Furthermore, languages that are learnable as first languages are *always* intentional languages, languages whose semantics generate opaque belief contexts, because they are not (deductively) closed under entailment or material implication, but are as (existentially) open as the hazardous groping ultimately responsible for evolving the human form of life. Once a first language is in place, however, one may, of course, learn any language, whether its semantics is intensional or extensional, and whether it be a mother tongue or an artificial language.

Artificial languages are never first languages, because they do not have any *direct or intrinsic* connection to the conditions of our embodiment that first generated language. They are, rather, artificial creations of humans in search of a rule-governed symbolism either to articulate certain relations in well-defined domains of phenomena, relations that are beyond the ken of natural languages because they mark either totally conventional distinctions, or to mark distinctions that obtain only above or below the levels of description where humanity's native bodily sensitivities gear directly into the world.

Artificial languages are *intended* constructs that have been created *through* and *within* natural languages—they are late-coming suburbs in the *Polis* of human articulate frameworks. Natural languages, on the other hand, emerged non-intentionally from a mute goal-directed form of life. For Polanyi, natural bodily actions, desires, gestures, and responses are the original and primitive form of natural languages; from these tacit bodily roots, the more sophisticated and refined forms of linguistic action emerge (PK 99). The evolution of natural languages transformed and consolidated mankind's bodily life into a mental life,

making it possible for humanity, in turn, intentionally to produce artificial languages that will further enhance its mental life. Humanity appears, therefore, as both begetter and child of its own articulate intelligence (PK 265): our native bodily teleology provides not only the purposiveness that *drives*, but the semantic template that *supports*, the intentional languages that we, in turn, use to contrive the artificial languages that give us intentional access to levels of description that are not native to our bodily involvement in the world.

VIII. RORTY, CHURCHLAND, AND POLANYI

Both Rorty and Churchland believe that the intentional idiom of folk psychology is *irreducible*. Here they agree with Polanyi, and distinguish themselves from the reductionists. But against Polanyi, neither conceives of folk psychology as an expression or extension of a bodily form of life. Rorty's recognition of the irreducibility of folk psychology derives from his conception of languages in general, his nominalist notion that whatever meaning a word or sentence has, it has by virtue of the entire holistic linguistic system of which it is a part. There just is no meaning invariance across different languages that some reductive definitions might preserve. For Churchland, on the other hand, folk psychology's irreducibility is a consequence of its empty ontology. No one expects a *false* theory to reduce to a true theory. Folk psychology embodies a theory about entities that just *do not* exist; and we know this, of course, from the fact that its "entities" do not figure into any scientific theory.

Polanyi, like both types of eliminativists, recognized that our "conceptual exploitations" are, to a large degree, determined by the language in which they are configured. But he, unlike them, dug deeper to discover the bodily roots of language itself, and discovered thereby the intrinsic constraints delimiting the character of possible natural languages. For Polanyi, all natural languages have a past in the long silence of the evolving body. Natural languages, or *first* languages, are never free from the bodily teleology that first uttered them: beneath, and expressed within, is the bodily form of life that silently extended itself through them.

From a Polanyian perspective, Rorty's fundamental claim that *all languages are radically contingent* is (at least) partially wrong. Polanyi would argue that there is a *real* distinction to be made between natural and artificial languages. Natural languages are a condition of the possibility of artificial languages. Moreover, natural languages are not contingently, but *biologically*, related to the mute evolutionary past of the purposive form of life that speaks them. Polanyi's account of the emergence of mind and language *non-contingently links* natural languages to the form of life that both produced them and was modified through them. Natural languages express a purposive form of life older than language that, through language, has been linguistically-elaborated into a full-blown intentional form of life. So, contrary to Rorty's view, the intentional idioms embodied in natural languages really do *express a non-linguistical nature*, namely, the intrinsically purposive human body.

Furthermore, recall that, for Rorty, persons are incarnated *vocabularies*. Polanyi would agree. But his emphasis would be different: persons are *incarnated*

vocabularies. Rorty claims that *language goes all the way down*. Polanyi, on the other hand, is convinced that *body comes all the way up*.

On Polanyi's account, folk psychology represents the anthropological "content of unsophisticated experience." Consequently, and contrary to Churchland's overly intellectualistic interpretation, folk psychology is not a theory of any kind, but rather a *pre*-theoretical framework of normative (*not* empirical or speculative) commitments. Folk psychology is not, therefore, a local and isolable theory about our inner kinematics, but an expression of a fundamental dimension of our form of life. From this perspective, Churchland's claim that folk psychology can be isolated and displaced by a non-intentional idiom (neuroscience) is wrong on two accounts. First, folk psychology, or at least its intentionalistic structure, functions in human communication more like a central nervous system than like a mere appendage that might easily be amputated and then replaced with a shiny new prosthetic device. Second, all extensional idioms are ultimately manufactured through intentional idioms, and thus are derivative languages connecting only *indirectly* to the form of life that manufactured them. Thus they will be learnable and teachable *only as* second languages. And this means that an intentional "mode of conceptual exploitation" will *already* be ineliminably entrenched within the experience of anyone capable of learning an extensional language, since our first language embodies the holistic network of tacit commitments under the constraints of which our mind emerges (PK 266-67).

From a Polanyian perspective, folk psychology is here to stay. Or, at least it will not be eliminated through mere alterations in pragmatic conveniences or mere wishes for a unity of science. If the import of Polanyi's thought is to the point, folk psychology will survive as long as humans are around to debate its status.