

Tradition & Discovery

The Polanyi Society Periodical

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The Polanyi Society

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Preface

This issue was guest edited by Walter Gulick who put together the program for a Polanyi Society meeting held at the American Philosophical Association in December of 2008. Some of the papers presented at this meeting are included in this issue. On page 6, Walter provides a brief introduction to these papers so I will say no more. Also you will find, after the APA papers, a memorial essay about Marjorie Grene who died last March. Grene was the philosopher who worked closely with Polanyi from 1950 until the 1958 publication of *Personal Knowledge* and who edited the collection of late Polanyi essays, *Knowing and Being*, published in 1969. She was an influential and formidable figure, and Polanyi acknowledged his appreciation for her help with *Personal Knowledge* (xv). There are three reviews of interesting books, some by folk who have in the past written for *TAD*.

The program for the annual meeting on Nov. 6 and Nov. 7 in Montreal is set; see the listing on page 5 and remember that papers for the meeting should be posted by late October.

Please note that this is the first issue of *TAD* in the new 2009-2010 academic year and that means annual membership dues should be paid. As I explained in the July 2008 issue, you now get a self-addressed envelope in the October and February issues of *TAD*. Dues remain \$35 (\$25 for libraries and \$15 students) and you are encouraged to make a tax deductible contribution to the Society. You can also still simply send me an e-mail (mullins@missouriwestern.edu) with credit card information and authorization to debit your account. With luck, I will this fall learn how to put a dues payment form on the Polanyi Society web site that you can complete on-line and e-mail to me.

Phil Mullins

Tradition and Discovery is indexed selectively in *The Philosopher's Index* and *Religious and Theological Abstracts* and is included in the EBSCO online database of academic and research journals.

NEWS AND NOTES

Polanyi Society Travel Fund

For students and others requiring assistance to attend the Society's meetings limited funding may be available. Society members are urged to inform worthy candidates that this assistance is available. Those interested in this funding, as well as those who know of potential candidates, should contact **Walter Mead** (wbmead@comcast.net) and see the information on the Polanyi Society web site. Contributions to this Fund in any amount will be gratefully received by Wally Mead, 4 Kenyon Court, Bloomington, IL 61701. They are tax-deductible.

Appraisal

The March 2009 (v. 8, n. 1) issue of *Appraisal: The Journal of the Society for Post-Critical Philosophy and Personalist Studies* should be published about the time that this issue of *TAD* is published. The following articles will be in the issue: (1) **Maben Poirier**, "Eric Voegelin's Immanentism: A Man at Odds With the Transcendent? Pt II." (2) **Bob Doede**, "Transhumanism, Technology, and the Future: Posthumanity Emerging or Sub-Humanity Descending?" (3) **Wendy Hamblet**, "Jacques Rancière: The Philosopher and His Poor on the Shores of Democratic Politics." (4) **Walter Gulick**, "Who Are the Persons of Michael Polanyi's *Personal Knowledge* and John Macmurray's *Persons in Relation*?" (5) **Phil Mullins**, "Polanyi on Agency and Some Links to Macmurray." *Appraisal* editor Richard Allen anticipates the October 2009 issue focusing on personal identity will be published in November or December 2009. This is the first of three issues that will have papers from the recently concluded Tenth International Conference on Persons. **Tihamér Margitay**, **Endre Nagy**, **Stefan Fothe**, **Yu Zhenhua**, and **Norman Sheppard** give papers and **Richard Allen** provided a comment on Polanyi's unique personalist account of science.

The revamped *Appraisal* website at <http://www.spcps.org.uk/> has the table of contents of all issues going back to volume 1 in March 1996. You can order a CD with all back issues, volumes 1 through 6. Payments can now be made via the website, making things much easier for subscribers outside UK.

Craig Scandrett-Leatherman's essay "Anthropology, Polanyi, and Afropentecostal Ritual: A Scientific and Theological Epistemology of Participation" was published in *Zygon: Journal of Religion and Science*, v. 43, n.4 (December 2008): 909-923. Below is the abstract for the essay:

The 1904 World's Fair in St. Louis sponsored both an International Congress of Arts and Sciences aimed at unity of knowledge and an anthropology exhibit of diverse peoples. Jointly these represented a quest for unifying knowledge in a diverse world that was fractured by isolated specializations and segregated peoples. In historical perspective, the Congress's quest for knowledge is overshadowed by Ota Benga who was part of the anthropology exhibit. The 1904 World's Fair can be viewed as a Euro-American ritual, a global pilgrimage, which sought to celebrate the advances and resolve the challenges of modernity and human diversity. Three years later Afropentecostalism dealt with these same issues with different methods and rituals. This ritual system became the most culturally diverse and fastest growing religious movement of the twentieth century. I suggest that the anthropological method of Frank Hamilton Cushing, the postcritical epistemology of Michael Polanyi, and the Afropentecostal ritual movement initiated by William J. Seymour are all attempts to develop a postmodern epistemology that is simultaneously constructive, focused on discerning

reality, and broad enough to allow for human consciousness and diverse human communities. I explore this confluence of scientific and participatory epistemology through six theses.

Yale Divinity School Collection Of William Poteat Papers

As noted in earlier issues of *TAD*, a collection of William Poteat's papers is being established at the Yale Divinity School Library. This project is now moving into its final stages. Soon Walter Mead will deliver materials to YDS. If you have not heard about this project and have materials that you think would be of value to this Poteat Collection, please inform Wally Mead (wbmead@comcast.net).

Electronic Discussion List

The Polanyi Society supports an electronic discussion group that explores implications of the thought of Michael Polanyi. Anyone interested can join. To join yourself, go to the following address: http://groups.yahoo.com/group/polanyi_list/join. If you have difficulty, send an e-mail to Doug Masini (Douglas.Masini@armstrong.edu) and someone will see that you are added to the list.

WWW Polanyi Resources

The Polanyi Society has a World Wide Web site at <http://www.missouriwestern.edu/orgs/polanyi>. In addition to information about Polanyi Society membership and meetings, the site contains the following: (1) digital archives containing all issues of *Tradition and Discovery* since 1991; (2) a comprehensive listing of *Tradition and Discovery* authors, reviews and reviewers; (3) the history of Polanyi Society publications, and information on locating early publications not in the archive; (4) information on *Appraisal* and *Polanyiana*, two sister journals with special interest in

Polanyi's thought; (5) the "Guide to the Papers of Michael Polanyi," which provides an orientation to archival material housed in the Department of Special Collections of the University of Chicago Library; (6) photographs of Polanyi; (7) links to a number of essays by Polanyi as well as audio files for the McEnerney Lectures (1962) and Polanyi's conversation with Carl Rogers (1966).

2009 Polanyi Society Annual Meeting

Montreal, Quebec

The Polanyi Society will hold its annual meeting November 6-7, 2009 in conjunction with the AAR annual meeting in Montreal. To attend any of the sessions of the the Polanyi Society annual meeting, it is not necessary to register for the AAR meeting. For additional information about the AAR meeting, go to the American Academy of Religion Annual Meeting site: http://www.aarweb.org/meetings/Annual_Meeting/Current_Meeting/default.asp . The information below will be posted, along with any updates and papers to be downloaded (by the end of October) on the Polanyi Society web site (<http://www.missouriwestern.edu/orgs/polanyi/>). Information will also be listed under Additional Meetings in the AAR annual meeting program.

Friday, 6 November 2009 Fairmont Queen Elizabeth Hotel-Chaudière

9:00-11:00pm Panel: “Toward a Polanyian Science of the Virtues”
Walt Gulick, Montana State University, Billings
Paul Lewis, Mercer University
Diane Yeager, Georgetown University

Saturday, 7 November 2009 La Centre Sheraton Hotel-Garcia Lorca.

8:00to9:00am A Celebration of *The Tacit Dimension* Re-Publication
Light breakfast

Reflections on *The Tacit Dimension*
Phil Mullins, Missouri Western State University
Wally Mead, Illinois State University

9:15to10:10am “Of One Mind? Merleau-Ponty and Polanyi on the Reduction of Mind to Body”

Florentien Verhage and Charles Lowney, Washington and Lee University

Response: David Rutledge, Furman University

10:20to11:15am “Is the Pope Catholic? Polanyian Reflections on Continuity and Authority”

John Apczynski, St. Bonaventure University

Response: Joe Kroger, St. Michael’s College

11:15to11:30am Business Meeting

Polanyi and Some Philosophical Neighbors

Introduction to This Issue

Walter B. Gulick

ABSTRACT Key Words: Michael Polanyi, Marjorie Grene, Susanne Langer, Aristotle, post-critical philosophy. *This brief essay introduces five articles that (1) explore the relationship between the philosophy of Michael Polanyi and several other philosophers and that (2) suggest ways that Polanyi's post-critical thought might be enriched by their philosophical insights.*

Michael Polanyi was driven by his intellectual passions toward philosophy; it was hardly his original career choice. As first a physician, then a physical chemist, and then a social scientist, he embarked upon his philosophical reflections with a rich background of experience but as a stranger to the philosophical profession. He was not the disciple of some particular philosopher, nor did he identify with some philosophical movement. Thus perhaps more than is the case with most philosophers, there is a need to place Polanyi's thought in relation to significant figures in the philosophical tradition.

This issue of *Tradition and Discovery* is devoted to extending the ongoing process both of identifying Polanyi's relationship to other philosophers and to advancing the post-critical movement he initiated by suggesting ways his thought might be creatively combined with the insights of other philosophers. All the articles, other than the memorial piece by Phil Mullins on Marjorie Grene, were originally given at the Polanyi Society's gathering held in conjunction with the American Philosophical Association's meeting in Philadelphia on December 28, 2008.

Let me comment on Mullins' thoughtful, even loving, tribute to Marjorie Grene first, for after all, Grene was doubtless the first philosopher to work deeply with Polanyi on philosophical topics, and she did this over a greater length of time than any other person. She wrote, "The great philosophers are pioneers as other great artists are – they provide new visions of what there is, new perspectives on the fundamental or 'insoluble' problems" (*Proceeding of the American Philosophical Association*, Supplement to 61:1 [September, 1987], 77). It might justifiably be said that Polanyi was a pioneer, but if so, then Grene would surely qualify as his chief scout and guide to a strange land. Mullins' essay shows how Grene's engagement with Polanyi was a significant step in her own process of becoming a philosophical pioneer.

In a letter of September 4, 1960, Polanyi playfully confided to Grene his awareness of being a pioneer, but one on the order of Moses looking at the land of milk and honey from Mount Pisgah but unable to enter it:

I have just [been] reading the opening of Langer's *Feeling and Form*. She says: 'It is peculiarly in the vague unsystematic realms of thought that a single problem, doggedly pursued to its solution, may elicit a new logical vocabulary, i.e. a new set of ideas, reaching beyond the problem itself and forcing a more negotiable conception of the whole field'. This is true, and here I stand at the edge of this enormous field, with precisely the kind of new ideas Langer speaks of, prevented by rapidly diminishing prospects from entering it. And you do nothing about it! Clash and Rathdrum!!' (Polanyi Papers, U of Chicago Library, Box 16, Folder 1).

The essays by Robert Innis, Walter Gulick, and Vincent Colapietro suggest that Susanne Langer might also well have served Polanyi as a philosophical guide. Polanyi refers to Langer's ideas several times in the corpus of his writings, but there is no indication that he incorporated her essential insights into the nature of meaning. This is unfortunate, because there is an enticing overlap not only between the new provinces Langer was exploring and the philosophical terrain Polanyi had encountered, but in the assumptions each brought to the search. They both understand human reason to be much broader and deeper than has been the case in most twentieth century Anglo-American thought. Both see themselves called to develop an embodied epistemology understood in terms of its evolutionary development and as having both logical and psychological dimensions. Each grants emotion a central place in cognitive development, although Langer gives feeling a much more significant place in her philosophy than Polanyi does. Each is influenced by Gestalt thought and opposes positivism and behaviorism. Both emphasize language as what distinguishes human from other forms of animal consciousness. And each pays attention to meaning as being of special importance not only for epistemological theory but for understanding human existence as such.

In his magisterial essay, Innis notes that Polanyi and Langer are complementary in their emphases within the context of their shared concerns. Langer, he says, focuses on the logical or semiotic dimensions of meaning, while Polanyi, with his stress on personal meaning, attends more closely to the psychological structures and activities that bring personal meaning into being. Innis' schematic suggestions about the way their thought may be integrated is the product of many decades of reflection and writing about both Polanyi and Langer; his informative book on Langer's thought published this year will be the subject of a review in a future issue of TAD.

My essay on Polanyi and Langer is a step in my effort to craft a comprehensive theory of meaning from a post-critical perspective. Polanyi's stress on the primacy of perception, the importance of tacit processes, the role of integration within the from-to structure of consciousness, and so on, maps out the general features of the strange land of personal meaning. Langer's brilliant discussion of the types of meaning provides building materials for the post-critical habitation of this fertile land. I give a report on one way that creative construction may help colonize the land's intellectual thickets and swamps .

Colapietro endorses the integrative efforts of the Innis and Gulick essays, but his commentary stakes out territory left relatively unexplored by the other two articles on Polanyi and Langer. He constructively traces out the roles that acknowledgment, responsibility and innovation have for a theory of persons who acknowledge their calling, take responsibility for even that which exceeds their conceptual grasp, and innovatively cast forward yet more adequate nets of meaning consistent with that responsibility.

Charles Lowney turns to more ancient philosophical sources in his provocative study of how Polanyi's thought supports the spirit rather than the letter of the moral law. He uses Aristotle's virtue ethics to provide food for thought, sprinkled with the salt and pepper of Kant's and MacIntyre's ideas. Yes, the moral novice needs the guidance of moral rules, but moral mastery is gained by imitation of the master's actions. Like the master craftsman, the master of moral wisdom has so integrated practical experience with theoretical reflection that his or her indwelt way of life provides skills for negotiating life's moral complexities with an agility that no set of rules can ever adequately express.

Polanyi may not have felt that at his age he had the capacity to enter and dwell in the land his pioneering efforts had discovered. But the five essays in this issue reveal that there are indeed persons inhabiting his philosophical neighborhood – Grene, Langer, and Aristotle surely – whose ideas provide resources for post-critical construction.

Between Articulation and Symbolization: Framing Polanyi and Langer

Robert E. Innis

ABSTRACT Key words: Susanne Langer, Michael Polanyi, articulation, symbolization, explicit, indwelling, gradients, emergence, Gestalt, semiosis, forms, ordered contexts, language, metaphor, limits of language, ineffability, art, religion.

In this article, I sketch the major points of intersection between the work of Michael Polanyi and Susanne Langer. The concepts of articulation and symbolization make up the organizing frame of the article. Langer's semiotic approach to mind and knowing in all their forms intersects in fruitful and challenging ways with Polanyi's approach that is based on the analogy of skills and the model of perception. Rather than being alternatives to one another, or incompatible in essential ways, they enrich one another with respect to "pushing meaning up and down," to art, religion, the emergence of mind, and the limits of language. Their focal concern with types of meanings hold their intellectual projects together in a vital and illuminating tension.

Why would, or even should, someone deeply interested in the work of Susanne Langer turn to Michael Polanyi's work for insight as well as perhaps an intellectual challenge—and vice versa?

My goal here is to frame in "indicative" and schematic fashion the elements of an answer to this question and to offer a set of pointers toward a fuller analysis.¹ I may, as it turns out, be preaching to the choir, but it is my hope that the choir may sense that I have at least been listening to the music.

Starting Points: Symbolization and Tacit Integrations

From the very beginning of her philosophical career, Langer foregrounded the universal human achievement of *symbolization* as the proper theme of philosophical reflection. *Symbolization*, on Langer's account, is an act essential to mind, just as *tacit integration* is for Polanyi. Symbolization, like tacit integration, is the generator of the essential openness of the human animal's world-building. Symbolization is the way humans "articulate" the world: from the lowest stratum of human feeling to the highest levels of cultural achievements. This gave both a "logical" and a "hermeneutical" twist to Langer's lifelong philosophical project.

The "logical" aspect of Langer's work is to be found in her attempt to establish a kind of semiotic backbone to support her analyses of "formed content" that makes up the world of meaning and its chief exemplars. It consists in two distinctions that she never repudiated: (a) between signs functioning on a fundamentally indexical and iconic level (to speak in Peircean terms here) that steer perceptual and behavioral action, allowing organisms to "cut" or "mark" the experiential continuum into "relevant joints," and signs functioning symbolically and (b) between the two *symbolic* types of discursive and presentational symbols, that is, between language and language-like systems and systems that follow a very different, non-discursive semiotic logic.² The "hermeneutical" aspect refers to her contention that *interpretation* as grasp of meaning permeates human life at all levels, both at the lowest level of organically rooted affect and perception, which occur in many ways out of our thematic control, and at the highest levels that mark cultural life in its most "articulate" forms, including the articulate form that is philosophy, the main task of which, for her, is the analysis of "meaning" in the broadest sense of that term. Polanyi, in *Knowing and Being*, called this multileveled continuum of interpretation "sense-

giving and sense-reading” and Langer called it the “symbolic transformation of experience.” Langer’s philosophical investigations from the very beginning of her career take place at, and at all places in between, these two poles or thresholds of meaning: the endosomatic pole of the embodied organism and the exosomatic pole of the symbolic animal. Polanyi’s investigations are also situated here, in spite of, or maybe even because of, the insistence on the “tacit dimension.”

But while Polanyi, influenced by the deep lessons of Gestalt theory’s analysis of perception, was concerned, at the beginning and throughout his career, with the perceptual roots of science, and with an extension of perceptual models to other forms of knowing, Langer was concerned with the symbolic roots of perception, with a kind of spontaneous grasp of emergent and emerging significance already present in configurations in the experiential continuum. Polanyi’s description of his work as “post-critical” points to its ultimate upshot: that human knowing, while it can be embodied in different methods that, ultimately and after much effort, are, or can be, under our control, is still rooted in acts that cannot be formalized or follow a set of explicit rules—although formalization, that is, articulation, leads to complex symbol systems that vastly increase our powers, pre-critical, critical, and post-critical alike. This is also Langer’s position. Polanyi, too, like Langer, pushed meaning-making “down,” in his case to the level of skills of all sorts, as well as “up” to the level of language and all the activities and cultural forms, mathematics, science, the law, built on it as a distinctively human achievement.

The Import of Skills and the Range of Articulation

A proper framing of how Langer’s and Polanyi’s achievements stand to one another must involve noting that Polanyi’s key notion of a “skill,” which emphasizes or rather establishes the tacit matrices of knowing, and the notion of “articulation” are intrinsically connected in a positive way with one another. A skill is, in fact, as I see it, a kind of articulation or articulate structure, just as articulation as an activity and not just an achievement is itself a kind of skill. Skills constitute, or give rise to, comprehensive wholes, as the fertile section on “wholes and meanings” in *Personal Knowledge* clearly and definitively established, with the pivotal, albeit not completely unproblematic, differentiation of existential and representative meanings. Polanyi writes, against the background of the fundamental and indispensable distinction between subsidiary and focal awareness: “When something is seen as subsidiary to a whole, this implies that it participates in sustaining the whole, and we may regard this function as its meaning, within the whole” (PK 58). Polanyi explains:

The distinction between two kinds of awareness allows us readily to acknowledge these two kinds of wholes and two kinds of meaning. Remembering the various uses of a stick, for pointing, exploring or for hitting, we can easily see that anything that functions effectively within an accredited context has a meaning in that context and that any such context will itself be appreciated as meaningful. We may describe the kind of meaning which a context possesses in itself as existential, to distinguish it especially from *denotative* or, more generally, *representative* meaning. In this sense mathematics has an existential meaning, while a mathematical theory in physics has a denotative meaning. The meaning of music is mainly existential, that of a portrait more or less representative, and so on. All kinds of order, whether contrived or natural, have existential meaning; but contrived order usually also conveys a message (PK 58).

The great merit of Polanyi’s analysis is not just that the model of skills enables him to introduce and exploit the notion of a tacit dimension, nor that it, when seen in the light of clues offered by Gestalt theory, furnishes

the foundation for the fundamental distinction between focal and subsidiary awareness, but that it shows that the twin poles of the tacit and the explicit are both forms of articulation in the most basic sense of that term. Just as motoric skills articulate and order the body, and perceptual skills, combined with actions, articulate and order the experiential continuum, so more explicitly symbolic skills articulate and intertwine with these prior domains, transforming them in the process by embodying them in, or extending them into, exosomatic instruments, special types of “contrived order.”

What Polanyi’s labels “articulation” in the famous chapter that follows the one on skills in *Personal Knowledge* is fully consonant with its immediate predecessor, as the analysis of the three types of learning that underpin our linguistic powers clearly shows. Trick learning, sign learning, and latent learning are all themselves *forms of articulation* that manifest the permanent tension between the tacit and the explicit and the logical gap that must be crossed by authentic achievements of all sorts. “To speak is to contrive signs, to observe their fitness, and to interpret their alternative relations; though the animal possesses each of these three faculties, he cannot combine them” (PK 82). Langer, throughout *Mind*, makes substantially the same point: animal intelligence and human mentality are marked by different forms of achievement rooted in bodily powers. But, I think, only a being who is *embodied in the explicit dimension and aware of being so embodied* can become reflectively aware of the tacit dimension and of both the existence and the explicit use of signs, a point Peirce also made. So, in one sense, we can say that recognition of the tacit dimension *as a distinctive form of articulation* is achieved by reflecting, aided by articulate instruments, on the conditions of the possibility of the explicit and of its authentic, indeed articulated, instances. This is the principal task Polanyi set himself at the beginning of *Personal Knowledge*. But running through his work, rooted in the twin affirmations of the analogy of skills (early) and the primacy of perception (early and later), is the theme of a Janus-faced notion of “meaning” as the achievement of “articulation” in the most basic sense of that term. Polanyi in this way “pushes meaning down” while at the same “pushing it up.” It is the construction of a general and nuanced notion of the many forms of meaning and their “logics” that joins Langer and Polanyi at the deepest level.

On Forms and Ordered Contexts: Dividing the Continuum of Experience

Langer’s main, and permanent, thesis is that “meaning accrues essentially to forms” (PNK90). For her, too, the experiential continuum is to be thought of as a *relational network of meaningful, or interpreted, wholes*, or ordered contexts. The pivot of Langer’s work, the idea of “symbolic transformation,” her word for “semiosis,” or sign action, draws attention to the transformation of, or transformative use of, the experiential continuum itself, resulting in the production of various symbolic forms (art, ritual, myth, science, and so forth) that have distinctive “logics” of their own. The job of philosophy is to explore these logics, including “the logic of consciousness” that will play a major role in Polanyi’s work and which Langer explored in depth in her great concluding trilogy, *Mind: An Essay on Human Feeling*. Symbolization and experience, Langer will claim, do not stand in opposition to one another, as the opposition of the “abstract” to the “concrete.” For Langer experience, in the human sense, is informed by, indeed permeated by, symbolic principles and features at the very start, while Polanyi will speak of the assimilation of wholes, or ordered contexts, to meaning. Experience can “stand for” itself—or be an “instance of itself,” or intrinsically meaningful, as Eugene Gendlin has perspicuously pointed out.³ Both Langer and Polanyi, in this sense, “push meaning down” while also recognizing that focusing on symbol systems—or forms of articulation—as objectively existing structures also “pushes meaning up.”

The problem that Langer, like Polanyi, confronted was what she called the “original segregation” of the continuum. Here she, too, like Polanyi relied on key findings of Gestalt psychology, especially the work of

Wolfgang Köhler. For her, this process of “cutting” or “drawing lines” in the sensory array is built into our perceptual apparatus, being, in fact, a biological property of our essentially embodied mind. Langer follows Ernst Cassirer in arguing that experiential wholes are, at the “lowest level,” essentially “expressive” or display a “physiognomic meaning,” an idea also developed by Polanyi in *The Tacit Dimension*. This often pragmatically oriented but always affectively tinged (that is, defined by attractions, aversions, and felt qualities) grasp of expressive or physiognomically defined wholes can be motivated by and embedded in even more articulated and symbolically informed contexts, which, so to speak, “name” them for us when we have ascended to the discursive level of sense-reading and sense-giving. Langer thinks that experience is permeated by or “presents itself as constituted by” qualitative features that are distinctive and immanent without being thematized—and that pull us toward them in a kind of fascination by significance.

But Langer goes further here: she contends that not only are experiential wholes intrinsically meaningful in themselves, but, as already mentioned, they also “stand for,” or can be taken to stand for, the features they display. That is, they are “natural symbols” that have a symbolic, but not discursive, function, even if they have a “representative” function in Polanyi’s sense of that term. A sensory image, or an experienced configuration in the perceptual field, is not just a complex sign of a thing which we have to deal with pragmatically, but a symbol, a *presentational symbol*, of this *type* of thing. Langer extends and applies here Cassirer’s notion of a “symbolic pregnance” that is present in “thick” experiential forms and goes on to show how this is the root of the essential notion of a “life symbol.” Perceptual forms *exemplify* properties and features. Langer locates one of the crucial features of human mentality not just in this ability to “see significance” in the experiential continuum, which animals also do, but to use and extend the “seen significance.” The great life symbols that appear in the highest reaches of cultural life—fire, water, sun, desert, trees, oceans, starry heavens, and so forth—do not have a conventional or arbitrary meaning imposed on them but themselves, as ordered contexts, articulate a world of meanings, indeed, world-orientations, as the history of religions and of world myths clearly shows. But like Polanyi’s (and Peirce’s) notion that only an animal capable of explicit thought can recognize through self-reflection that its foundation is in the tacit or become aware of signs and symbols as such, for Langer, I think, only an animal that is through and through symbolically endowed in more than one dimension can “use” ordered wholes as themselves symbols, in this case presentational symbols. The “symbolic turn” for Langer refers to the singular ability of humans to “turn” experience itself into symbols, and symbolic forms, and not just react to physiognomic qualities by aversion or attraction or have their behavior steered by “practical” concerns, which is the case with other primates.

Langer adds to Polanyi’s notion of an existential meaning a more differentiated reference to the type of meanings that such Polanyian “ordered contexts” can have. There are vast aesthetic, even religious, implications here—as well as more straightforwardly epistemological implications. The key notion, which Polanyi had pointed out, is that ordered contexts, in themselves, do not have to bear, realistically or factually, upon anything outside of the context itself—*nor do they have to bear in the same way*. Abstract painting is a case in point: it exemplifies features without “naming” them or making them features of any discernible “object.” It is the same with music. When symbols are fused inextricably with what they mean we have Langer’s equivalent of Cassirer’s expressive level of meaning and, by extension, of mythic consciousness. There is no “distance” between symbol and object. While Langer, following Cassirer’s lead, will foreground the participation of the mythic symbol in its object, Polanyi will foreground our participation in the symbol. Ordered contexts that in the strict sense (or some sense) represent the world are clearly neither for Langer nor for Polanyi restricted to the discursive domain, which is a set of ordered contexts of a distinctive sort. Thus both painting and mathematical physics are “representative” in Polanyi’s sense, but Langer would see them as different symbolic modes with

different “logics” and representational powers. I think, therefore, that while Polanyi’s notion of two types of “ordered contexts” is not exactly equivalent to Langer’s pivotal distinction between presentational and discursive forms, they are nevertheless mutually reinforcing and intertwined—and they are equally fundamental, albeit different in their weightings.

Polanyi refuses to accept the automatism of the genesis of ordered contexts, or of the original qualitative segregation of the experiential plenum by a kind of “primordial attunement,” while Langer sees the segregating activity as arising from the types of bodies we have and from the neural development they have undergone, although this does not contravene her insistence on the supervening distinctively human activity of giving rise to explicitly symbolic meanings. In *Mind* Langer foregrounds the role of images in stabilizing the sensory flux, resulting in, or deriving from, an act of abstraction. Here she foregrounds the crucial distinction between generalizing and presentational abstraction, echoing the discursive /presentational contrast (see *M-I* 153-198). Langer further anticipates and confirms later work by George Lakoff and Mark Johnson on image-schemata as operative, lived-through structures that underlie, and help to define, world-building.⁴ Langer goes beyond Polanyi, moreover, in pointing out other features of Gestalt theory that bear upon the generation and constitution of ordered contexts.

Paradigmatic Role of Art: On Gradients and the Logics of Indwelling

This turn to Gestalt theory is connected with Langer’s goal of charting the “morphology of feeling” and for the paradigmatic role of art in her construction of a model of mind. As she puts it, “all levels of feeling are reflected, explicitly or implicitly, in art” (*M-I* 208) and they reveal the “logic of sentience.” These levels are defined by “gradients”—and are not restricted to art but saturate all levels of sense-reading and sense-giving. “Gradients of all sorts—of relative clarity, complexity, tempo, intensity of feeling, interest, not to mention geometric gradations . . . permeate all artistic structure” (*M-I* 211). Langer then proposes that, quite generally, “sensations, like emotions, like living bodies, like articulated forms, have gradients of growth and development” (*M-I* 214), which she charts in great detail in the three volumes of *Mind*.

Gestalt theory’s further relevance to this notion of gradients is supported by the following phenomenologically rich passage from Wolfgang Köhler, which Langer cites:

Quite generally the inner processes, whether emotional or intellectual, show types of development which may be given names, usually applied to musical events, such as: *crescendo* and *diminuendo*, *accelerando* and *ritardando*. As these qualities occur in the world of acoustical experiences, they are found in the visual world too, and so they can express *similar* dynamic traits of inner life in directly observable activity. . . . To the increasing inner tempo and dynamical level there corresponds a *crescendo* and *accelerando* in visible movement. Of course, the same inner development may express itself acoustically, as in the *accelerando* and *reforzando* of speech. . . . Hesitation and lack of inner determination become visible . . . as *ritardando* of visible or audible behavior (*GP* 248; cited *PNK* 226).

Gradients and felt qualities, it is clear, spread over the whole field of awareness.

Polanyi for his part, no stranger to the philosophical implications of Gestalt theory,⁵ also develops the crucial notions of indwelling and embodiment, which can helpfully augment Langer’s thought. While Langer

parallels Peirce, Dewey, and Whitehead in speaking of qualitatively defined configurations, that is, configurations or ordered contexts with “distinctive feels,” Polanyi shows us the fateful implications of our perilous engagement with such configurations that exist as exosomatic semiotic tools. They can “bias” our access structures to the world by reason of their “probal nature”—a characterization that Polanyi also applies to language.⁶ As he writes in *The Tacit Dimension*, “we can . . . interpret the use of tools, of probes, and of pointers as further instances of the art of knowing, and may add to our list also the denotative use of language, as a kind of verbal pointing” (7). All probes open up a kind of “space,” depending on what they are meant to do. We *attend from* the probes while we attend to what they put us in contact with. This analogy of the indwelt probe, based on the from-to structures of awareness, is one of Polanyi’s most powerful working notions, although it is not restricted to him, as Merleau-Ponty has formulated a similar notion. It adds to Langer’s more objectively oriented analyses a description of what is existentially at stake when we commit ourselves to forms of articulation.

There is, in fact, a kind of way of thinking of art itself in probal terms. Polanyi bases his aesthetics, if we can take, at least up to a point, the treatment in *Meaning* at its face value, on the crucial distinction between *self-centered* and *self-giving* integrations, thematized in the semiotic mode as the distinction between *indication* and *symbolization*, which, it should be clear, is used in his work quite differently than in Langer’s. The spine of Langer’s semiotic schematization of meaning-making is the distinction between (a) a pragmatically conceived notion of indication, involving a grasp of real connections, unthematized resemblances, and a responding to “signals,” and (b) a notion of symbolization that takes both a presentational and a discursive form. Polanyi is concerned to draw attention to *our relation* to the way the sign-complex and “object meant” constellations are integrated to one another or to the way we are integrated to them, and not to the specific kind of work the various sign and symbol systems are trying to do. *Existential-semiotic relationship*, not logic of meaning, is at issue here. Transparency in contrast to density, pointing to in contrast to participating in, are the chief notions that Polanyi places at opposite poles to one another. Nevertheless, the “peculiar transparency” of language that Polanyi talks about has a “distinctive feel” that defines a kind of existential and semiotic embodiment, something Langer also confirms in her analysis of argumentative thinking. Such thinking has a distinctively phasal structure culminating in

the cadential feeling of solution, and the expansion of consciousness in new knowledge. If all these phases merge in one configured passage, the thought, however hard, is natural; and the height of discursive style is the embodiment of such a feeling pattern, modeled, word by word, on the progressing argument. The argument is the writer’s motif, and absolutely nothing else may enter in. As soon as he leads away from the motivating thought to (say) mystical or moral reaction, he is not supporting the process of understanding (*FF* 302).

But, clearly, *passing through* and *participating in* cannot be separated by a phenomenologically sharp dividing line. And the great achievement of “symbolization” in Polanyi’s use of the term is the *existential shift* that occurs in the creation of symbols in this sense of the term. Polanyi is surely right in his contention that we “pour ourselves” into these symbols and in this way undergo an existential shift, being caught up in a “play of meaning” that surpasses us. But Langer was concerned to delineate the “spaces” of these symbols primarily by her discussion of the “primary illusions” each art genre—or mythic, religious, or ritual frame—constructs. Here, I think, Langer and Polanyi are once again complementary, rather than merely talking past one another. Polanyi parallels the work of Paul Tillich in this respect, developed first and foremost to account for the nature of religious language, which Polanyi accepts, but now applied to the aesthetic domain of religious meaning. This domain is composed of samples from the sea of consciousness, or islands of meaning, emerging in the great plenum of

perplexity that marks our lives. The turn to the “presentational” is found here, demanded when “words fail.”

Langer, I have said, is not essentially concerned with a phenomenology of the relation of the perceiver to the meaning-bearer or sign-configuration but with the “logic” of meaning-bearing matter and the “objects” upon which it bears. Her approach is “objective,” as I see it, while Polanyi’s is “subjective”—or, in his terminology, “personal.” Polanyi is concerned with the “logic of consciousness” while Langer is concerned with the “semiotic logic” of a symbol that we nevertheless really do participate in. While self-giving integrations break the trajectories of transparency, presentational symbols break the trajectories and constraints of discursivity. But Polanyi is able to show us the *lived logic* of the great existential shifts attendant upon the development of presentationality. We are always intertwined with our semiotic systems, but presentationality induces and effects a very different type of event of meaning and *event of self-change*, without our falling into the trap of the fallacy of false contrasts. Still, Polanyi’s analysis of commitment and of persuasive passions, which are given a different, or differentiated, formulation here, is just as much at work in the realm of Langer’s discursive forms as in the realm of presentational forms—maybe even more at work when we foreground “meaning” more than “truth.”

I think, nevertheless, that Langer’s deeply grounded distinction between these two types of symbol systems, between saying and showing, is a major contribution and a kind of analytical ultimate. These two types define logically different forms of meaning-making and world-access structures. Langer follows Peirce’s lead here in determining the kind of objective “semiotic work” a symbol does. This work is oriented toward the object, not toward the subject or more broadly the interpreter, which Peirce assimilates to the “rhetorical side,” that is, the type of significant effects a sign, however understood, has upon the sign user. Langer is also concerned with the “syntactic” and “semantic” side of the symbol, its internal semiotic logic. This dimension, while not totally absent from Polanyi’s analysis, is not thematized in his work to the degree that we find in Langer. The internal differentiation of the constitution of discursive and presentational forms is not present in the same thematic way in Polanyi’s analysis, although Polanyi has a sober and well-grounded account of the conditions of a language system in his “articulation” chapter. These make up the equivalent of what Langer called the logic of a discursive form.

The Place of Language: Metaphor

With regard to language, the pivot of human forms of symbolization and articulation, both Langer and Polanyi think of language as fundamentally a means of articulation, of conceptualization. By emphasizing, without falsely separating, the conceptualization, rather than the communication, side of articulation, both Langer and Polanyi are forced to engage the universally relevant issue of the nature of metaphor as both the lived-through ground floor of concept formation and as the motor of semantic change. While it could be said when all is said and done that both Langer and Polanyi accept, in some sense, the “fusion” model of metaphor, what they share is a driving of the point of origin of metaphorical significance down “below language itself.” Metaphors are not just linguistic phenomena. They involve the grasp of the plurisignification of symbolically pregnant forms, that is, perceptual forms, the grasp of shared qualities—qualitative, “felt,” resemblances. The ability of perceptual Gestalts, in multiple modalities, to exemplify, and to force recognition of the exemplification of these shared qualities, is the focal point of Langer’s semiotic approach to metaphor. Langer thinks of metaphor as the law of growth of language, relying on Philipp Wegener’s analysis.⁷ Polanyi traces it to perceptual structures: integration of incompatibles that constitute an emergence of sense and meaning, as in perceptual integration or, more specifically, binocular vision. Langer roots metaphor in the symbolic nature of embodied perception itself: it exemplifies, or rather is defined by, the image-schematic structures that Lakoff and Johnson have emphasized

and prime symbols. And in this sense meaning is self-moving and self-weaving in a kind of spontaneous fashion, not being methodically generated and not being under our control. Polanyi clearly, following and transforming Max Black and thinking of the integration of incompatibles, speaks of the emergent quality of a metaphor, its non-reducibility to its “literal” foundations or components. It is a *semantic novelty* and also a *general model of emergence*. But a semantic emergence is something conceptual, not ontological, although it functions as a kind of non-substantialist model of an emergence. I am echoing Polanyi’s notion here of the distinction between an ontological and conceptual emergence.

Dwelling in and Breaking Out: Art, Religion, and the Limits of Articulation

Furthermore, the *attended from* subsidiary particulars, with their diverse meaning-functions within a formed whole, are very differently configured in the two types of Langerian symbols systems: the presentational and the discursive. As to a presentational form, exemplified in art, Langer writes: “A work of art is a single symbol, not a system of significant elements which may be variously compounded. Its elements have no symbolic values in isolation. They take their expressive character from their functions in the perceptual whole.”(M-I 84)

This passage clearly echoes the earlier one cited from Polanyi (PK 58). Looked at from the standpoint of pragmatist concerns, these syntactic features “qualify” our access to the world, mediated by the perceptual whole, and are themselves *indwelt*. Here is a further specification of the role of *gradients* in the realm of art, which inform our consciousness by the expressive character that *emerges* from the relational complex that is the presentational form. I think, as a result, that Polanyi can help us understand better the embodiment side of aesthetic indwelling, in particular, and presentational indwelling, in general, and the felt character of these complexly related gradients. Gradients as a field of attended-from subsidiaries *direct* and *inform* our indwelling. They help to “carry us away.”

When Polanyi speaks in *Personal Knowledge* of “breaking out” of a contemplative frame and encountering an ineffable reality, it seems to me that he is speaking not just of a religious-mystical vision or experience. Attempting to say the unutterable, or having one’s understanding or experience outrun one’s powers of articulation and formulation, as in the domain of sophistication, is itself a kind of knowing, an eminently tacit knowing experienced in the midst of the explicit. It is the *felt knowing of a limit*, maybe even a kind of negative knowing (a cloud of unknowing). Indeed, such experiences can be set up in maximally articulate frames that induce (by “spiritual reading,” for example, an exemplary form of religious practice) an attempt at understanding that shatters while giving us a kind of acquaintance with “ineffable realities” or “real presences.” Langer teaches us, with reference to Wittgenstein, that the ineffable does not have to be the irrational. It could be, indeed is, just another form of rationality, but not exercised in the discursive mode. Michael Sells’ book, *Mystical Languages of Unsayings*, charts this type of language as it is exemplified in the works of paradigmatic mystics.⁸ According to Sells, there is something in not just the paradoxical semantic content of the mystics’ utterances but in their syntactic configurations, which are “strange,” or, as Paul Ricoeur has pointed out, “deviant.” According to Langer, it is precisely the syntactic features of a presentational form that mark it off as essentially different from a discursive form, even if its material carrier is language. The presentational form is not language-like at all. It is not a strict formalism but an original Gestalt that is internally differentiated by all of its elements being combined in a relational whole. Langer delineates, with sophistication and acumen, the internal make-up of these objective structures. And, moreover, I think that she also allows us to see that *dwelling in* and *breaking out* are not really in strict opposition to one another. If, as Polanyi asserts, we can never fully say all that we know by reason of the tacit residue, this does not mean that we do not know it. And the experience of “breaking out” of an articulate

framework is itself situated within a horizon of meaning that gives us an experience of limits without specifying explicitly the limit, which is nevertheless “grasped” even as we are grasped by it. But this really shows that all articulation is finite in effect—even if it strives to be infinite. And, in the case of art works, we could say that the experience of ineffability does not lead to an inarticulate cry, as in mystical insights, but to the construction and interpretation of an articulate form that follows a very different kind of semiotic logic. Art, in fact, gives us a means of “breaking out” of the discursive frame of language even if it is the product of the language animal par excellence. Its “vision” belongs to, and is enabled by, another frame.

Speaking of symbolization and self-giving integrations, Polanyi says that we are not only embodied in the artwork in the way we are embodied in a probe but that we “pour ourselves” into the artwork (or ritual, or mythic symbol, as the case may be) so that it embodies us in all the movements and nuances of our consciousness. It integrates us (or objectifies our disintegration) in the very process of symbolic embodiment, thus giving all the dimensions of our existence and flexions of consciousness a symbolic form. This is one of the reasons that we are “touched” by works of art—and prime symbols—and see ourselves in them. Langer specifies more clearly the details of the elements that are integrated into the embodied and indwelt symbol—which is also a symbol of embodiment—while Polanyi specifies the conscious logic of such an embodiment.

An artwork engages us often and even predominantly without our explicit control. This is one of the most essential lessons of Polanyi’s schematization of our cognitional situation. This is, in fact, an aesthetic aspect of the phenomenon of subception—as well as the tacit nature of all the “transactions” integrating self with world. We are affected by clues and cues without our conscious advertence and this “being affected” is a kind of meaning and a form of interpretation. An art work, for Langer, is a form of feeling or a formed feeling. Polanyi tells us, in a certain sense, what to look for and how to look and where to look, in the vast field of subsidiaries functioning as vectors, but not what we will find. Langer tells us what we will find, objective forms made up of perceived gradients that constitute a realm of primary illusions, but not where we will find it. We will find them, if we follow Polanyi, in all those “from structures” that define *the particulars and their gradients* that we both integrate and are *integrated into*. Langer gives us a semiotic phenomenology of these structures. Polanyi gives us a schematization of our semiotic relation to these structures. This is another instance of where we are not, I think, forced to make a sharp contrast between Langer and Polanyi. Just as in the case of artworks, dwelling in and breaking out are really not opposed, so self-centered and self-giving integrations are not opposed, but intimately connected. It is the weighting and the gradation that must be taken into consideration.

Emergence and Novelty: Mind in Origin and in Action

Another point of intersection is the analysis of emergence and of novelty. Both Langer and Polanyi oppose simplistic monism and radical reductionism. They acknowledge a kind of *nisus* toward complexity and “higher orders,” defined in terms of complexity. Such a *nisus* is immanent, not imposed from without nor in any clearly empirical sense foreordained, even if Polanyi thinks it is possibly “elicited” by a “cosmic field” one could call “God.” But their motivations were different and Langer went so far as to call herself a “sober naturalist.” Indeed, we must see her whole project as a form of semiotic naturalism. The symbolic animal is a thoroughly natural being, arising in nature through natural processes and not endowed with any “supernatural” trappings. But this does not make Langer a “materialist” in any simple sense of that term. While she opposes vitalism and an intrinsic, or inevitable, teleology, at the same time she affirms that with the arrival of “feeling” in the human sense, with its symbolic torquing of experience, we have a transition to *mind, sensu stricto*. This has no parallel in the rest of the animal kingdom, as Polanyi also asserts by insisting on the *combinatory ability*, and the self-reflexivity

attendant upon it, of humans as opposed to the other animals. “Feeling,” as Langer uses the term, arises as the psychic phase of organic processes, but she takes great pains to chart the emergence of mind in the human sense as dependent upon the ability to operate symbolically. Indeed, mind is an achievement of semiosis as a kind of cosmic event. Mind is, in fact, extended and embodied in externally existing systems of signs, which make up its matrix, too.

Langer, while not a process philosopher in any technical sense of the term, does not think of the mind as a “substance.” It is a moving relational complex, a self-assembling but not “substantial” whole, that is essentially self-interpreting. It arises as a purely natural phenomenon. It is the “place” or “topos” of meaning. It is relational complexes, made up of acts, that show all types of distinctive features and qualities that are phenomenologically accessible at all levels of reality. This is the great theme of *Mind*. While relations are the key to Langer’s work both in semiotics and the philosophy of mind, Polanyi, once again, helps us see how relations are apprehended: a whole is an ordered context. And higher orders of contexts, and orders of orders, arise through and in relations and patterns of relations. A whole, grasped within the from-to structure of awareness, is a pattern of related, or integrated, elements. Patterns and elements are apprehended together within this twofold structure. We could ask, in light of this, whether for Polanyi, too, the mind is to be so thought of in this way? Is it not a self-assembling process of reflectively recursive integrations of both self and other, rooted in the ever present background of a tacitly integrated and indwelt body? Is this not a position very close to William James’s analysis of the stream of consciousness?

Polanyi starts with perception and arrives at meaning. Langer starts with meaning and arrives at perception. But Polanyi’s schema of the tacit triad and the indispensable reformulation of the parts-whole relation allow him to have a model of emergence that does not involve any break with a broadly conceived natural order or the imposition of new levels and realities “from the outside.” Is it possible, one might ask, to interpret Polanyi’s account of emergence in semiotic terms, that is, that what we encounter are emergent levels of complexity and meaning? The principle of marginal control is key here. Langer, I think, does not have an equivalent, but it allows Polanyi to talk perhaps more precisely about just how different levels of reality can emerge without any *deus ex machina* intervention. Neural activity is essential to thinking, but thinking, indeed, the various forms of sentience, is an emergent property of the *relations* between neural events. A new phenomenal property as well as a new type of activity arises on this neural basis. So, having a distinctively human body is a condition for the “emergence” of mind. If we take seriously Polanyi’s account of how to conceptualize the so-called “mind-body” issue, with the distinctiveness of the from-pole, which includes our body, then he has shown us how the state of the body appears as the *meaning* of the appearing world. That is, Polanyi formulates the relation between the body and the emergent field of consciousness in light of his model of tacit knowing, without speculating, on just “how” consciousness or sentience arises from a properly structured body. It is a phenomenal fact and a field for rich and thick descriptions.

The Genetic and the Semiotic

Going a bit further, we could say that Langer tries to develop in *Mind* a genetic and semiotic account of the rise of mind—especially the human mind—while Polanyi tries to uncover the “logic” of the relationship between mind and its somatic underpinnings. Langer uses the analogy of the glowing wire to talk about feeling as the “change of state” of a physical system when it crosses the threshold to sentience or feeling. Consciousness or sentience becomes the *felt meaning of the body*. It integrates the body (and concomitantly the world) into a meaningful unity, albeit on different levels depending on the types of consciousness we are concerned with—

and the types of bodies involved. And the body then becomes the enabling condition for our awareness of the world, the ultimate “instrument” for world-building. But it is not something that we can take up and put down at will. There is furthermore a parallel between the “body” of consciousness and the “body” of signs in which we dwell. Indeed, when Polanyi distinguishes in *The Tacit Dimension* a “semantic aspect” of tacit knowing, that is, that tacit knowing creates *meaning* by indwelling sets of clues and integrating them into coherences, he is in fundamental agreement with Langer’s deepest insights. But Langer charts in more detail the semiotic phenomenology of the origin of meaning. In this her concerns are perhaps more genetic, while sharing with Polanyi a “generative” concern, if I may be so bold as to make such a distinction.

Pushing Meaning Up and Down: Verifying and Validating

Langer and Polanyi most importantly intersect with their concern to “push meaning down” to a primary stratum “prior” to taking on the epistemological or critical attitude. They show that the grasp of meaning is an “event” in which we are caught up, not something that we first and foremost “do.” But, nevertheless, it is something that we do in the sense that it engages us in feats of interpretation and integration. There is a delicate tension between spontaneity and deliberate action, for, on both Langer’s and Polanyi’s account, meaning in all its forms wells up and envelops us, “carrying us away.” “Pushing meaning up” is an achievement that is framed in intersecting, but not identical, ways. Langer’s approach is semiotic and involves a thematization of the logic of formed content, which makes up a kind of “cultural hermeneutics.” Polanyi’s approach took on a more explicitly semiotic cast later in his work with his pivotal distinction between indication and symbolization and the parallel notion of self-centered and self-giving integrations, exploited in *Meaning*. I would say that the singular power of presentational symbolization in all its modes is that it exemplifies our self-giving to realms that defy discourse, presenting us with “occasions of experiencing” that “articulate” a total self-disposition of acknowledgement and acceptance. While Langer and Polanyi apparently differ on the material side of validity of these systems of life symbols, they complement one another in terms of developing the formal frames within which they are encountered and interpreted.

In this respect, I think that the distinction between *verification* and *validation* needs to be explored in great detail. Validation, on Polanyi’s reckoning, involves a fuller participation in the frame, a deeper sense of embodiment and indwelling, a greater delicacy and skill in identifying the features and aspects of subjectivity that are objectified in the life symbols. There is a need for *existential skills* and not just objectively oriented cognitive skills in the sense that we are “disposing” of ourselves by participation rather than construing the world “objectively” by indication and a consequent verification. But it is crucial not to put these two forms of cognitive and existential commitments into any irreconcilable relation. They are weightings and emphases, not strict alternatives. Langer emphasizes the *semiotic depth* of these prime symbols that elicit from us such deep participation, while Polanyi charts the existential depth of the logic of commitment.

Polanyi’s notion of indwelling is, I think, an extraordinarily powerful notion, perhaps with more evocative, rather than analytical, power than embodiment, to which it is cognate and with which it shares many supporting examples. It is our polymodal body in which we dwell. Polanyi never strays from his recognition of the centrality of body consciousness as a paradigm of non-objective awareness. The body, both endosomatic and exosomatic, is both the source of, and placed within, a “field” of awareness, but it is as source the “zero point” of the coordinates of all “objective givens” and as placed within these coordinates it is spread out over the whole cultural field. The whole body can never be completely given as an object, although we have a fundamental feeling of its differentiated “tonus” as a kind of affective Gestalt. It is the way the world feels. Langer foregrounds this

phenomenon of a somatic tonus in key sections of *Mind*. Polanyi has powerfully shown that dwelling in the body has a distinctive feel and as the body is extended out into sets of exosomatic instruments its feeling structures change, as I have argued in *Pragmatism and the Forms of Sense*. Each type of exosomatic instrument functions as a kind of tentacle by means of which we touch the world—and the world touches us. John Dewey wrote memorably about this in his *Art as Experience*. Our exosomatic body, the realm of objectified forms, or Hegel's objective spirit, not only belongs to us; we belong to it. Our indwelling introduces distinctive biases in our body-feeling, generating different "feels" attendant upon their functioning as access structures to the world and to ourselves. I think that this notion of a distinctive feel applies most fruitfully to sign and symbol systems—and to theories of signs and symbol systems. These systems also have objective, "bodily," being. Just as a wooden probe has a different feel from a cast iron one, so different semiotic—and philosophical—systems have different feels.

In conclusion, Langer's and Polanyi's intellectual projects should themselves be seen as probes with different conceptual feels. They are fundamentally probes we have to learn to use, that is, *validate* and not just theoretically *verify*, in order to open up the space of meaning-making that we ourselves are.

Endnotes

¹I have treated Susanne Langer's work as a whole in my *Susanne Langer in Focus: The Symbolic Mind* (Bloomington: Indiana University Press, 2009). It furnishes the background for the admittedly brief and schematic comments here, with a number of references to parallels with Polanyi. I have treated Polanyi's work in a number of different contexts and formats, but perhaps the most mature and fundamental discussions are to be found in chapter 2, "The Tacit Logic of Consciousness: From Perception to Art," in my *Consciousness and the Play of Signs* (Bloomington: Indiana University Press, 1994) and in chapter 1, "On the Perceptual Roots of Linguistic Meaning," and chapter 4, "Technics and the Bias of Perception: The Tacit Logic of Embodied Meanings," in my *Pragmatism and the Forms of Sense: Language, Perception, Technics* (University Park: Penn State University Press, 2002).

In addition to the usual abbreviations for Polanyi's works, the following abbreviations will be used in the text:

FF Susanne Langer, *Feeling and Form: A Theory of Art Developed from Philosophy in a New Key* (New York: Scribner's, 1953).

GP Wolfgang Köhler, *Gestalt Psychology* (New York: H. Liveright, 1947).

M-I Susanne Langer, *Mind: An Essay on Human Feeling*, Vol 1 (Baltimore: Johns Hopkins University Press, 1967).

PNK Susanne Langer, *Philosophy in a New Key: A Study in the Symbolism of Reason, Rite, and Art* (Cambridge, Mass.: Harvard University Press, 1942; 2nd ed., with new preface by the author, 1951; 3rd edition with new preface by the author, 1957).

²Langer's first distinction is for all intents and purposes identical with Terrence Deacon's Peirce-inspired positioning of the "cut" in semiotic levels that mark the rise of the "symbolic species." Of course, prior semiotic levels are themselves transformed when subsumed up into a symbolic matrix, in the strict sense of that term, as Peirce so clearly showed. See Terrence Deacon, *The Symbolic Species* (New York: Norton, 1997).

³Eugene Gendlin, *Experiencing and the Creation of Meaning* (Evanston, Illinois: Northwestern University Press, 1997; originally published in 1962 by The Free Press of Glencoe).

⁴See especially George Lakoff and Mark Johnson, *Metaphors We Live By*, with a new afterword (Chicago: University of Chicago Press, 2003).

⁵See my "Tacit Knowing, Gestalt Theory, and the Model of Perceptual Consciousness," *Danish Yearbook of Philosophy*, vol. 27 (1992): pp. 23-43.

⁶I have, as indicated in note 1, explored this theme in some detail, with explicit reliance on Polanyian analytical tools, in two chapters, “On the Perceptual Roots of Linguistic Meaning” and “Technics and the Bias of Perception: The Tacit Logic of Embodied Meanings,” in my *Pragmatism and the Forms of Sense: Language, Perception, Technics* (University Park: Penn State University Press, 2002).

⁷See my *Pragmatism and the Forms of Sense*, pp. 88-98 for a discussion of Wegener’s work in light of the approaches to language of Karl Bühler and Alan Gardiner, upon both of whom Polanyi relied for his own treatment of language, as noted in the chapter on articulation in *Personal Knowledge*.

⁸(Chicago: University of Chicago Press, 1994). The introduction and epilogue give a compact and extremely provocative schematization of the issues only gestured at here. See also my “Language and the Thresholds of Sense: Some Aspects of the Failure of Words,” *The Journal of Speculative Philosophy*, 22/2: pp. 106-117.

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Polanyi and Langer: Toward a Reconfigured Theory of Knowing and Meaning

Walter B. Gulick

ABSTRACT Key Words: Michael Polanyi; Susanne Langer; meaning construction; symbolization; signals; tacit knowing; integration; evocation; embodiment; emergence; schemas; pattern recognition; personal, conventional & cosmic meaning.

This article is intended to advance a comprehensive understanding of knowing and meaning that is sensitive to biological and psychological evidence as well as to ethical and religious concerns. It proceeds by integrating Michael Polanyi's theories of the evolutionary emergence of centered beings, tacit knowing, and the from-[via]-to structure of consciousness with a revised version of Susanne Langer's theory of symbolization. The revision stresses the importance of signals in all human and other animal attunement to reality and argues for dividing Langer's notion of presentational symbolism into a component shared by the more developed animals and one unique to humans. It details autonomic, receptor, learned tacit, and conceptual contributions to personal meaning.

Introduction

Arguably the most important challenge that confronts epistemology today, and certainly one of the most important for philosophy as a whole, is coming to a clearer, more comprehensive understanding of the nature of meaning. The key term here is “comprehensive,” for vast amounts of thought have been devoted to the exposition of linguistic and logical meaning, but comparatively little has been devoted to the biological underpinnings of the making of meaning or to an exposition of the linkage between meaning and significance. This essay is part of my long range goal of making some progress toward establishing a useful framework for a comprehensive theory of meaning attentive to our embodied state and our longing for significance as well as to its semiotic and psychological status.

Among the many disciplines or subdisciplines that have an ongoing interest in the topic of meaning are, in addition to philosophy, microbiology, sociology, information technology, psychology, neuroscience, religion, anthropology, complexity theory, ecology, linguistics, and ethology. Two philosophers who have devoted themselves to a rich, comprehensive approach incorporating many of these areas of study are Susanne Langer and Michael Polanyi. Much new information pertinent to understanding meaning has come to light in the nearly 35 years since each philosopher stopped writing. While I try to be alert and responsive to new developments in the interpretation of meaning, in this essay I am focusing my efforts on mining the still very provocative ideas of Langer and Polanyi, seeking a creative integration of their most fruitful insights into the nature of meaning.

The Evolutionary Rise of Centered Personhood

If one is to develop a theory of meaning that is sensitive to our biological heritage and respects the embodied nature of thought, where might it be best to begin? Polanyi's answer, which I affirm, is to ground epistemology in a theory of evolutionary emergence. For the purpose of understanding knowing and meaning,

it is not necessary to be sidetracked into a discussion of how living beings differ from the non-living. It is more productive to examine what novel ontological structures arise with the advent of living beings.

The laws of physics and chemistry rule in the lifeless world. Apart, perhaps, from the big bang, there is no center to which matter and energy are subject.¹ With the advent of life, a new dynamic, at first barely noticeable, arises. The activity of the bacterium or plant or animal is not just the resultant of impinging forces upon it. Rather each living being has what Polanyi calls an active center that both uses and repels outside forces.² “Our existing knowledge of physics and chemistry can certainly not suffice to account for our experience of active, resourceful living beings, for their activities are often accompanied by conscious efforts and feelings of which our physics and chemistry know nothing” (*PK* 336).³ Obtaining nutrition, avoiding enemies, and reproducing must be coordinated and prioritized by some center if the living being, and by implication, the species, is going to survive. Survival is a purpose-laden standard of success; there is a telic dimension intrinsic to the process of living.⁴

Moreover, when one looks at the development of more and more complex species in historical perspective, it is evident that evolutionary advance occurs incrementally. It has much in common with the development of a town. The first houses necessitate a certain pattern of roads and open up lots where successive houses may most logically be built. While some poorly constructed early buildings are replaced, most livable houses are retained as the town grows. Gradually wider streets, new utilities, and other infrastructure improvements are put in place.

Evolutionary advances also build upon existent structures or components that have proven successful. Primitive cellular functions that work in a simple species, for instance, are retained by more complex living beings even as new functional structures are selected for in the colonization of untapped environmental niches. This idea is salient for seeing how human knowing is the culmination of a long process in which humans share with much less highly developed animals many of the same cellular and neural functions that proved successful in early stages of evolution.⁵ The brain stem is the oldest part of our brain, and more and more regions of activity have been built upon it in evolutionary development. For humans, the process has culminated in the emergence of the cerebral cortex, itself the center of specialized lobes for initiating action, reasoning, and processing sensation. The point is, though, that relatively little is discarded in the process of the evolution of the brain, as is indicated by the fact that humans have much the same DNA as not only chimpanzees, but even birds and worms. If little is discarded, then humans share with other animals certain procedures, perhaps quite primitive, for responding meaningfully to their environment. As we will see, in animal learning Polanyi sees exemplifications of meaningful adaptation to and increasing control of the animal’s environment. Humans retain many of these pre-linguistic patterns of learning. If it can be shown that we are conscious to some extent of these intellectual but pre-linguistic patterns, this would constitute a solid basis for critiquing those who claim humans are trapped in and cannot surmount webs of language. And Polanyi’s theory that includes non-linguistic subsidiary awareness as part of the structure of consciousness provides such a basis for critique.

If in the process of evolutionary growth successful functions are assimilated by increasingly complex living beings, and these are functions crucial to the survival of their centered hosts, does this imply that complex beings incorporate a jumble of more and more competing functional centers? In recent years the modular view of the mind has attracted a number of adherents. Langer is dubious about the usefulness of speaking of multitudinous centers. “[T]he chains of ‘centers,’ each performing a phase of the response and leading to a lower and more rigidly automatic ‘center,’ have not been found; not even any areas permanently related to a particular

action have been identified” (*M II* 20).⁶ Elsewhere Langer disputes the appropriateness of assigning any center to simple organisms like the amoeba or to plants (*MI* 298). Her concern seems to be an empirical one: that a specific site where messages are received and “decisions” made often cannot be identified. However, in terms of Polanyi’s evolutionary perspective, a center need not be physically located at some particular region or in terms of a particular purpose or function. Rather it has a transcendent identity; it expresses the fact that for the organism to survive its various functions must be at least roughly coordinated and prioritized, that is, centered. In this sense, no living being can be reduced solely to the laws of physics and chemistry.⁷ Nor can it be seen, as Langer indicates, simply as an aggregate of assimilated centers.

The establishment of organisms as centered beings has two important corollaries. First, the organism exists in the world in a dichotomous manner, as from a phenomenological point of view there is a split between its own interest-laden centeredness and otherness. Dualistic thinking, self-interest, and anxiety about otherness thus are rooted in the ontological structure of a centered self standing over against the enveloping world; they are not simply psychological dysfunctions or arbitrarily imposed habits of thought. Furthermore, the difference between the active center and the otherness of the world supports the ontological distinction between subject and the world of objects. The problem of Descartes’ mind-matter split is not that it is expressed in terms of subject and object, but that subject and object, mind and matter, are treated as separate substances. The disjunction between incommensurable substances creates the massive problem of how mind is related to matter, a problem that Polanyi’s understanding of emergent stratified realities helps resolve.

A second corollary relates to the issue of the respect in which humans are centered beings. With what in human experience is this center to be identified? A traditional answer, identified with our Greek heritage, is to identify the center of human existence with reason. Freud’s ego is a recent version of the rationalistic heritage. But such an identification makes non-rational human behavior unintelligible and mysterious and sets up conflict between reason and such things as feelings, emotion, biological drives, and social pressure. Just as it may not be helpful to look for the center of an animal’s being at a specific site, so it is problematic to define the center of human existence too narrowly. My suggestion is that it is most fruitful to adopt a transcendent view of human centeredness that incorporates reason, but also feelings, emotions, biological drives, and social responsiveness.

In postulating the existence of a transcendent human center, I do not mean to be taken to be formulating some perspective from which all the internal conflicts and messiness of life are resolved. Instincts, social pressures, personal aims, and the like are tangled together in knots of rationally irresolvable complexity. For human beings, the notion of a biological center oriented toward survival needs to be supplemented with notions acknowledging the impact upon behavior of various linguistic, social, and cultural forces that are dependent upon the power of symbolization to open up alternatives and develop cultural worlds in which we dwell. Polanyi and Langer are both adept at probing the “logic” of these complexifying factors. Polanyi’s provocative thesis is that the notion of God provides a transcendent center beyond our biological center (and our psychological center, or ego) that integrates the incompatibilities of ordinary life (*M* 156). This is a self-transcendent center one participates in via a stance of worship. It also seems possible to adopt a morally delineated transcendent center defined by Polanyi’s “firmament of standards” (*TD* 51) which would involve a radical responsibility to these standards. Yet another transcendent center can be correlated with Kant’s notion of the transcendental idea of the thinking subject, except that any Polanyian center would be embodied rather than being at core a metaphysical principle. These are intriguing and tantalizing possible ways of conceptualizing personhood worthy of extended consideration in some other context.

Correlating Latent Knowing with Langer's Signals and Symbols

What does this cursory glance at evolutionary history from bacteria to persons have to do with the nature of human knowing? For both Langer and Polanyi, the answer is “plenty.” Polanyi appreciates that the psychic processes issuing in the intelligent behavior of rats, bats, and cats have been retained in human knowing, although not at the center of consciousness. Rather their intellectual abilities underlie and support the more noticeable activities of that most vociferous of the cerebral newcomers – language. While genetically endowed instincts and dispositions play a role in animal behavior, animals are hardly robotic in their environments. They have the ability to adapt to their circumstances through trick, sign and latent learning (see *PK* 71-77). Two of the most significant characteristics of Polanyi's epistemology are embedded in these three types of animal learning: (1) the heuristic character of human knowing, most clearly exemplified in the scientist's act of discovery, and (2) the contribution of these types of animal learning to the tacit activity that underlies and supports all human knowing.

The roles that trick, sign and latent learning play in a comprehensive theory of knowledge are so significant that further elaboration is called for.

Trick learning is based upon the discovery of useful means-ends relations, manipulations that advance an animal's interests. Trick learning thus underlies the development of skills, of knowing how. Most skills cannot be learned through verbal instructions alone; they arise primarily through experimentation, imitation, and practice. Polanyi thinks the roles of apprenticeship and traditions have been underemphasized in the examination of how we know. “To learn by example is to submit to authority. You follow your master because you trust his manner of doing things even when you cannot analyse and account in detail for its effectiveness” (*PK* 53). The successful contrivances of trick learning eventuate in embodied skills, types of tacit knowing. For Polanyi, all knowing arises out of embodied acts, and these embodied acts can lead either to theoretical knowledge or purposeful action. I find the way his thought consistently shows how thought and action are of a piece to be one of his most important contributions to an inclusive theory of knowing.

Polanyi says that “in sign-learning the animal is taught to expect an event by recognizing a sign foretelling the event” (*PK* 72). It is Langer, rather than Polanyi, who most effectively describes the significance of sign learning. Polanyi's interest in this sort of learning is motivated primarily by his attempts to understand the heuristic nature of knowing, and especially to understand how environmental signs might foster scientific discovery. Langer, too, appreciates how signs (or what she comes to call “signals,” a usage followed in this paper) foretell future events. But her notion of a signal is much more fully developed than Polanyi's. She says that a signal “indicates the existence – past, present, or future – of a thing, event, or function. Wet streets are a sign[al] that it has rained. A patter on the roof is a sign[al] that it is raining. A fall of the barometer or a ring around the moon is a sign[al] that it is going to rain” (*PNK* 57). Signal learning, then, is tied to perceptual significance, the meanings of what we perceive. But Langer goes on to offer an even broader understanding of the significance of signals. The term “signal” covers “not only explicitly recognized signals – red lights, bells, et cetera – but also those phenomena which we tacitly respect as signals to our sense, e.g. the sight of objects and windows whereby we are oriented in a room, the sensation evoked by a fork in a person's hand that guides him in raising it to his mouth . . .” (*PNK* x). This broad notion of a signal thus indicates that at both a tacit and explicit level we are aware of and oriented in the world about us through our sensations and perceptions. Signals are tutors of reality. The most significant signals evoke active responses. Signals, then, are key “players” in tacit knowing.⁸

Latent learning, the third type of inarticulate learning identified by Polanyi, “is achieved not by a particular act of contriving or observing, but by achieving a *true understanding of a situation which had been open to inspection almost entirely from the start*” (PK 74). It is a kind of mental map which allows for strategic interpretation and a sort of planning. Relying on their latent learning, rats can learn the spatial structure of a maze so as to simplify their efforts in reaching the food available via one route only.

While the correlation is not exact, I see some commonalities between Polanyi’s notion of latent learning and Langer’s notion of presentational symbolism. Langer contrasts “presentational symbolism,” which refers to spatial images lacking vocabulary and syntax, with discursive symbolism, which unfolds in time, with language as its dominant form. She refers to items like pictures, maps and graphs as presentational symbols, and here it is quite clear that these items have referential meanings that are not comprehended by animals. This point is crucial, for Langer insists that everything she labels a “symbol” has a meaning for humans alone. We humans are the symbolizing animals, by which she means we have the capacity to conceive what is symbolized apart from any pragmatic need to respond to it. In contrast, nonhuman animals are immersed in a world of signals.⁹ She emphasizes the functional difference between signals and symbols: “signs [signals] announce their objects to [a subject], whereas symbols lead him to conceive their objects” (PNK 61).

But here is the confusing issue. Isn’t there a significant difference between an image of which we (or any sufficiently developed animal) are conscious and humanly constructed maps or graphs? Surely all the more developed animals must schematize the flow of sensations into recognizable images in order to identify their surroundings, to know when fight or flight is appropriate. Yet Langer wants to restrict the use of all symbols, including images, to humans. How does she understand animal behavior to come about if nonhuman animals cannot arrest the flow of sensory input by fixing it in the form of images?

The reason why animals, operating without concepts or symbols, can function as effectively as men might do in similar situations, and sometimes more effectively than men could, is that their major instinctive acts are highly articulated, phylogenetically developed units, unconfused by any awareness of merely possible exigencies, possible errors, or thoughts of other possible acts (M II 77).

Clearly Langer has never observed my dog, Morgan, when my wife and I go in different directions and he is confused about which person to follow. In starting first one way, then another, he certainly betrays an awareness of two possible acts.

I do not doubt that animals inhabit quite different worlds than ours. And Langer, relying on an impressive array of research by animal psychologists, makes a good case for the proposition that “animal perception is more intimately bound to overt action than ours” (M II 54). However, if animals do not perceive things as objects or images, how do they gather information about the world in order to respond appropriately to its opportunities and dangers?

Percepts are often very indirect deliverances of interacting sense impressions of mingled sorts. The principle of their formation is selection, among all the elements in the external aspect of a situation, of those that will implement whatever acts are in progress. . . . In other words, the primary characteristics which animals see are values, and all the qualities of form, color, shape, sound, warmth, and even smell, by which we would naturally expect them to recognize things,

enter into their perceptual acts only as they enter into their overt behavior as values for action (*MII* 54-55).

I find it difficult to be clear about exactly what view of animal perception Langer supports, for she strongly rejects the idea that animal behavior is to be understood in terms of stimulus and response (*M II* 76), whereas the immediately preceding quotation certainly suggests a sophisticated form of stimulus and response.

To become clearer about the differences between nonhuman and human animal consciousness, let us rely on the principle that human consciousness incorporates elements from our evolutionary past, much like ontogeny recapitulates phylogeny, and turn within to excavate our responsiveness at pre-linguistic levels. In suggesting an introspective turn be utilized, I also recognize it is no easy task to get reliable results when plunging into subjectivity.

Perhaps our introspective excavation can best be facilitated by examining multi-tasking, for in simultaneously performing tasks at two or more levels, we are often conscious of our involvement at each level, although conscious in different ways and to different degrees. Some of us – shame, shame – carry on intense conversations on our cellphones while driving. Our focal thoughts are absorbed in what is being communicated to us and how we should respond. Yet at the same time we are observing road conditions and steering, braking, and shifting accordingly. Is this because we keep switching our attention from the conversation to the act of driving? Experientially this does not seem to be the case on the whole. We often dwell in several levels of attention at once, a view convincingly illustrated by Polanyi's discussion of the difference between our simultaneous awareness of subsidiaries and our awareness of what we are focally attending to. Our act of driving while conversing is an example of our being-in-the-world, to cite Heidegger. Our vision of the road does not seem to be encapsulated by language; rather we are involved in a skillful performance that is meaningfully engaged with the signals provided by the environment. We do not think "road" or "curve" as we maneuver our car along a hilly highway, but neither are we immersed in an ever changing display of unconnected sense data. We are, I will contend, responding to sensations that have been schematized so that we know tacitly that we are traversing a road without being focally aware of it as such. The schematized percepts being relied upon seem to be what Langer calls images (see *PNK* 144). My strong suspicion is that the higher mammals interact with their environments in a similar way to how we maneuver a car while our focal attention is otherwise occupied. This sort of consciousness seems to fall somewhere between the values for action Langer posits for animals and the presentational symbols found in pictures, maps, musical compositions, etc. I will proceed in accordance with this supposition.

To sum up, the evidence suggests to me that nonhuman animals experience a limited type of presentational symbolism in which images, including those responded to as signals, are not "contaminated" by discursive symbolism. That is, animals experience a primitive form of unself-conscious conception expressed through sense images as exemplifications of the schemas of latent learning. The rapid eye movements and twitches of sleeping dogs, comparable to human REMs and movements when asleep, suggests that dogs experience images in dreams much as humans do. In human imagination, on the other hand, concept and percept are generally fused. In the fullest sense of presentational symbols represented by maps, pictures, and graphs, the reliance of the images on language is evident. One could not make use of a map, for instance, apart from a linguistically shaped worldview including linguistic instruction about how to read and interpret maps. In short, I believe Langer's notion of presentational symbolism ought to be divided into two parts: (1) the primitive, imagistic aspect found in dreams and signal identification, and shared by the more complex animals including

humans, and (2) the realm of culturally supported, non-discursive symbols like pictures, maps and graphs that is understood by humans alone.¹⁰

The Construction of Personal Meaning

Based on the foregoing discussion, I will next propose a theory of meaning derived from selected aspects of the thought of Polanyi and Langer. The basic framework to be utilized arises from discrimination concerning types and processes of consciousness. It is my aim not to limit discussion to an exploration of the structures of meaning, but also to consider meaning in its temporal dimension. What happens to meaning once it has bloomed? Finally, how does meaning relate to significance?

A place to begin is the structure of tacit knowing as it is spelled out by Polanyi. He speaks of what he terms “the triad of tacit knowing” in these terms: “A person A may make the word B mean the object C” (KB 181). Two important things may be noticed in Polanyi’s phraseology.

First, he says that a) a person endows a word with meaning. This way of speaking reinforces Polanyi’s emphasis on the activism of the knowing subject. But it also tends to obscure the fact that b) words and indeed all cultural symbols have conventional meanings of which a subject makes use. “Endowing a word with meaning” thus seems to overstate what a person speaking does when accepting, as an elicited gift, words to express what the person wants to say. The person is responsible for the words settled upon, but meaning is not projected upon the words by an all-controlling subject. Rather pre-existing conventional symbols are seen as fitting to clarify what are often the vaguely felt schemas that one seeks to express within the communicative constraints provided by conventional syntax in mundane (non-poetic) language.

Furthermore, c) within scientific investigation and ordinary experience there have arisen processes, structures, and relations that are isomorphic with cosmic structures and processes. This is hardly surprising, since survival would seem to be dependent upon veridical assessment of environmental realities. To extend instinctual capacities arising from our evolutionary past, some of the most salient cosmic forms have been indwelt by humans as they have learned how to cope with the threats and opportunities of living. So it is that two standards for judging the adequacy of speaking may be identified: (1) how well language can express indwelt prelinguistic tacit knowledge – the wisdom of the body – and (2) how accurately language can articulate the processes, structures, and relations of the reality in which we dwell.

Based on the points just made under rubrics a), b), and c), it makes sense to distinguish three general realms of meaning: a) *personal meaning* that is the product of an individual’s activity as a creative interpreter, b) *conventional meaning* that is manifest in language and culture, and c) *cosmic meaning* as the processes, structures, and relations that make possible order, purpose, and achievement in the cosmos rather than chaos and perpetual arbitrariness.¹¹ My primary focus in this paper is upon personal meaning.

Polanyi generally acknowledges the impact that is made on an individual’s thought by convivial communities and civic society. Culture acts like a storehouse of shared conventional symbols, playing much the role that long-term memory plays for an individual. Cultural symbols are stored in artifacts like dictionaries, films, libraries, and the internet plus in social practices into which individuals are socialized – most obviously in the guidance of children as they learn to speak. They are taught not only a vocabulary and proper usage, but a whole worldview by the way words and their uses divide up and organize the natural and social worlds. So long as the

role of cultural symbols and conventional meanings is acknowledged and honored, I would agree with Polanyi that such symbols only take on life insofar as they are used in some way by persons. The endowment of meaning is then not *de nova*, but rather an application of agreed upon units of meaning within a social context in which standards of ordinary or proper usage are immanent.

Second, Polanyi's triad sets forth three related terms: subject, word, and object. He is by implication speaking of a person using language to designate a mental or physical object. This is an example of denotation. But Langer persuasively argues that denotation includes four terms: subject, symbol, conception (connotation), and denoted object. She recognizes that usage of a symbol always generates a conception; this is the defining characteristic of symbols (PNK 60-61). A thing that directly indicates an object is a signal; no conception is involved here. The relation between a symbol and its associated conception is connotation. "Because the connotation remains with the symbol when the object of its denotation is neither present nor looked for, we are able to *think about* the object without reacting to it overtly at all" (PNK 64). Such reflective autonomy is the emancipation from practicality that is distinctive of human consciousness.

Langer identifies four types of meaningful relationships: signal relationship, presentational symbolism, and the two aspects of discursive symbolism: connotation and denotation. Polanyi's thought would be enhanced by these Langerian distinctions; they ought to be included in any comprehensive theory of meaning. But Polanyi's emphasis on the embodied, skillful nature of meaning, with its tacit roots, also contributes much to a comprehensive theory. Implicated in the tacit triad is another notion that makes a significant contribution to a theory of meaning. This is Polanyi's notion, derived from Gestalt theory, of *subsidiaries* that are integrated to bear on a *focal* meaning. The fusion of two stereo images into three dimensional sight is a good example of Polanyi's subsidiary-focal or *from-to* theory of meaning creation.

[W]e are *focally aware* of the stereo-image, by being *subsidiarily aware* of the two separate pictures. And we may add that the characteristic feature of subsidiary awareness is to have a function, the function of bearing on something at the focus of our attention. Next we may observe that the focal image, into which the two subsidiary pictures are fused, *brings out their joint meaning*; and thirdly, that this fusion *brings about a quality* not present in the appearance of the subsidiaries. . . . The fusion of the clues to the image on which they bear is *not a deduction* but an *integration* (KB 212).

The subsidiaries may be subject to any degree of consciousness as long as they carry out the function of jointly creating a focal object.

Polanyi's notion that a person integrates subsidiaries to form a focal whole that is more than the sum of its parts is analogous to his view of the evolutionary emergence of new species that are discontinuous with their ancestors. It is a comprehensive view of meaning creation that he uses to explain perception, discovery, use of skills, empathy, and indeed all aspects of human practical and theoretical knowing. Embedded in his view is the notion that items arising at an earlier point in evolutionary history may be combined to create a new entity at a higher level in the many layered advance of awareness. For the purpose of better understanding the nature of meaning, four distinct embodied epistemological dimensions of meaning-construction may be distinguished.

First, there is the dimension of the vast number of autonomic transactions that usually occur below the threshold of possible awareness, although in a broad sense of the word "meaning," as implying purposeful

functions, these transactions are meaningful. The many autonomic response systems regulate breathing, arousal states, motor readiness and activity, and many other visceral behaviors. In Langer's language, the innate systems of signal responsiveness involve endosomatic (self-generated) participation in tacit meaning-making. If these transactions were accessible to feeling, they would be felt as action (*MI 31*). These various functions make possible and indeed are involved in many higher level states of awareness and responsiveness, but since they operate automatically, we need not consider them explicitly further.

The second dimension to be considered involves the ongoing reports of our many embodied receptors and sensors. Most of these reports, although they have the potential to be the subject of conscious attention, exist below the level of awareness. They may well serve as unconscious signals for autonomic responses, for instance, by helping us keep our balance. Such signals seem to emerge into awareness either because higher level conscious concern singles them out or because some reports exceed default levels of intensity that call for awareness (as of some internal pain). A loud noise, for example, may break off our reverie and demand attention to possible danger. The second dimension of meaning-making, then, is exosomatic in Langer's terminology; it acknowledges the importance of world-reporting content that is shaped by us even as it is given to us. It would be felt as impact (*MI 31*).

Thirdly, there is the dimension of tacit learning that Polanyi detailed in non-human animals. Trick, signal, and latent learning are intelligent responses to the information reported via the second dimension of meaning-making. The consensus of animal psychologists seems to be that the more complex animals are conscious and calculating beings, although they have the capacity for making use of discursive symbols only to a very attenuated degree if at all.¹² One variety of Langer's four types of meaning, learned signal *responsiveness*, occurs in this dimension, whether or not the response is made at a conscious level. The example given earlier of driving a car while otherwise occupied describes how humans make use of the skills internalized at this level of learning. I also see this as the dimension within which Langer's sense-images belong; they represent the information provided by sensory receptors transformed into recognizable objects. When disconnected from the realism provided by awareness of new sensory input or the control provided by conscious purpose, sense-images may take off into the strange world of dreams, a sort of quasi-conception. Most generally, though, the third dimension is the home of learned schemas.

The fourth and most richly complex dimension of meaning-construction features conception. As Langer insists, conception requires symbolization, whether of the discursive or presentational form. Here Langer's sense-images have been extended beyond being mere appearances and have become either culturally influenced presentational objects or subject to a degree of conscious manipulation in the form of imagination. Important as imagination is in the life of the mind, my special focus will be upon the role of language in bringing about conception in its discursive forms of connotation and denotation. It is now time to examine language and the psychic forces that produce coherent discursive conception.

Pattern Recognition, Integration, and Evocation

Polanyi essentially considers words and other symbols to be one kind of a whole nest of subsidiaries. In doing so, I think he obscures the indispensable role that language has in creating uniquely human conception, a state of consciousness no other subsidiary entities can accomplish. To be sure, a certain sort of mind is required to carry out the function of transforming psychic material into symbols, because without this transformative process, even words are but objects, sounds or a collection of letters. Humans alone seem to have this sort of

mind naturally. Humans can impute to certain rocks, animals, or colors all sorts of powers. Then the rocks, animals, and colors take on a symbolic function beyond mere recognition, which reminds us that to function as a symbol does not necessarily mean to function rationally.

Symbols become the means of communication and the stuff of civilization when they acquire a meaning accepted by a community. Language is founded through common usage implying communal agreement concerning vocabulary and grammar. Words may be regarded as conventional symbols. They operate in the functional space between dimensions three and four, mediating between learned but inarticulate schemas and the articulate world of thought.¹³ I would argue that there are many advantages to expanding Polanyi's from-to structure of consciousness to accentuate the unique role of language. A from-*via*-to structure more adequately portrays the structure of ordinary, language-infused human consciousness than just the from-to structure.¹⁴ While the *via* might stand for any sort of symbol in creating conception, for the sake of clarity I will in the following discussion restrict it to a particular language. Thus the formula is to be understood as follows: our consciousness starts *from* some set of subsidiaries, is integrated *via* concepts linked to words or phrases, and is directed *to* meaningful conception. Here is an alternative version: *from* diversity *via* discursive symbols *to* unified thought about x .

In "Sense-Giving and Sense-Reading," Polanyi describes four examples of tacit knowing: the use of a skill, the reading of a physiognomy, probing with a stick, and playing chess. What sort of meaning does each have, and how is the from-via-to structure employed? A well developed skill in use will likely be a routine performance that does not require the attention needed to decipher something new or uncertain. Our multi-tasking driver might decide to put in a CD to play some music while still talking to a friend on the cellphone. The conversation would presumably require the most focal attention and be carried out within the from-via-to structure. The driver would undoubtedly direct occasional bursts of focal attention to the process of driving, but it is likely that as a whole the acts of driving and putting in the CD are best analyzed as routinized, two-term skills: for example, *from* subsidiary attention to internal embodied signals and perceptual signals *to* the skill of driving or putting in the CD.

With respect to Polanyi's example of the chess player, one could say knowledge of the possible moves of the chess pieces plus knowledge of chess strategy are dwelt in as conceptual subsidiaries to the planning of subsequent moves with interest/intention centered on winning the game. The chess player acts *from* relatively unimportant embodied skills (except as they underlie and support thinking) and *from* the intention to win *via* a rich array of symbol-based conception *to* meaningful moves of the chess pieces. This example suggests that where one's interest lies helps direct the direction and course of thought. The importance of interest to the shape of meaning is made especially clear in Polanyi and Prosch's *Meaning* through the discussion of symbol, metaphor, and works of art.

An expression on a person's face might well be read as a signal to the interesting but unperceivable state of a person's mind. A signal response per se requires no conception and has a twofold structure: *from* recognition of a known pattern (a schema) *to* identification of a state of affairs. However, the reading of a physiognomy, a signaling function involving a subject of interest, would likely be followed quickly by speculation – linguistic probing is not excluded from items of interest for long. The reading of a face to interpret a state of mind thus has a more heuristic nature than the routine identification of a known person.

The mentioning of face recognition calls attention to the rather different ways in which Polanyi and

Langer make use of Gestalt psychology. Polanyi emphasizes integration of parts to a whole, while the key terms for Langer are abstraction and form – to which I would add pattern recognition.

Polanyi does not devote attention to animal psychology and the sources of symbols, language in particular, to nearly the degree that Langer does. His inspiration comes primarily from two related models: the Gestalt understanding of perception and his experience of scientific discovery. “Gestalt psychology has demonstrated that we may know a physiognomy by integrating our awareness of its particulars without being able to identify these particulars, and my analysis of knowledge is closely linked to this discovery of Gestalt psychology” (*TD 6*). He speaks of integration of subsidiaries as producing comprehensive entities not reducible to a summation of their parts. “*The higher principles which characterize a comprehensive entity cannot be defined in terms of the laws that apply to its parts in themselves*” (*KB 217*). When one shifts one’s focal attention from a whole to the parts, one loses a grasp on the whole they jointly create. However, one can, as it were, project an imaginative coherence unsupported by known subsidiaries, and, through a process of imaginative evocation, identify the parts that comprise a rightly imagined whole. Such evocation and subsequent integration through intuition underlie his view of scientific discovery.

Langer writes, “The abstraction inherent in perception as such results (if our current theories are right) from the elimination of countless possible stimuli; so the simplification is effected as in a lithograph, by eliminating everything but the features that will be left to function” (*PS 71*). I would add to what Langer says that in order for an animal to survive, it must recognize the same patterns again and again – the “face” of enemies, food sources, etc. – and the process of storing patterns is what is meant by schematization, occurring at the third level identified earlier. Langer suggests that concept formation occurs by a process rather different than is involved in perception. She speculates that concepts first arose out of what she calls “physiognomic” images (*M II 284*) that have airs of non-pragmatic values, of mystery that lures imaginative conception, as in the primitive symbolic form of dreams.

The several characteristics that make the mental image prone to become symbolic are, in the first place, this spontaneous, quasi-automatic production; secondly, a tendency of image-making processes to mesh, and pool their results; then their origin in actual perception which gives images an obvious relation to the sources of perception – things perceived – a relation we call “representation”; furthermore, the very important fact that an image, once formed, can be reactivated in many ways, by all sorts of external and internal stimulations; and finally, its involvement with emotion. (*PS 43-44*)

Are Langer’s emphasis on abstraction and Polanyi’s language of integration and evocation compatible? Yes, in these ways: Langer’s emphasis on pattern recognition seems fundamental in perception. A schema is essentially a pattern. But a pattern has details or parts that tend to be ignored in perceiving the whole pattern. If they are examined in detail, the sense of the whole is lost from consciousness, just as Polanyi emphasizes. The fact that in Gestalt perception one cannot necessarily identify the parts being integrated seems quite likely to be because the holism of pattern recognition takes precedence over the integration of parts. The pattern includes the parts without the need to focus on them first. Pattern matching and recognition seem particularly dominant in signal responsiveness. That is, pattern recognition prevails in what Polanyi calls routine thought taking place in a fixed framework. On the other hand, the learning involved in trick, sign and latent learning requires integration in the construction of some pattern or embodied schema in a heuristic performance. Even concepts – to which words and phrases are often connected – have a schematized pattern.

Note, however, that Polanyi's notion of indwelling, exemplified in his example of using a probe to understand the shape of a cavity, provides an embodied use of integration not directly reducible to pattern recognition. Neither are the earlier example of stereoscopic seeing and many other examples. Furthermore, Langer's speculations about the rise of symbolism in general and language in particular supplement rather than contradict anything Polanyi writes. Langer's views on pattern construction as resident within perceptual organs are valuable inquiries into the origins of schemas (even though Langer does not use the language of schemas, but rather sometimes speaks of memory storage – which I see as involving schematization).

Polanyi's use of integration and evocation as basic psychic acts illuminates well embodied actions and language usage. It is useful to note that, insofar as integration creates wholes that are more than the sum of their parts it is a non-linear process. In his language, the process of integration can cross logical gaps. Similarly, when in evocation supporting parts of a whole are called forth, a non-linear process that is something other than simple logical analysis is involved. Analysis is a logical function taking place at the level of explicit thought, whereas evocation may be seen as undoing the creative non-linear integration of subsidiaries that originally created the whole or pattern. One cannot recall a person's name by simply analyzing the thought one has of the individual; the name may emerge in a sudden manner outside of one's conscious control. The larger implication suggested by the distinction between analysis and evocation is that logical analysis is of very limited usefulness in thinking through epistemological processes.¹⁵ All too often this shortcoming of logic has not been recognized. I conclude that pattern reading, integration, and evocation are primary mental functions essential to any theory of personal meaning, and that the notion of interest is basic to an understanding of the course meaning takes.

Embodied Significance: Purpose, Standards, Responsibility, and the Integrative Vision

Neither Polanyi nor Langer spends much time examining personal meaning in longitudinal terms. What happens to a meaningful conception once it is achieved? In brief, it is either remembered or forgotten. Those insights with a significant emotional charge tend to be internalized within long-term memory. The great majority of meanings arise within working memory, but quickly fade away, replaced by new meanings. However, through associations, by their placement in narrative, because of their part in an ongoing project, as moments in reflection, and so on, even rather trivial meanings often are indwelt and function as subsidiaries for subsequent meanings. That is, conceptual meanings are first experienced and then may be internalized for later employment. Notice that an important transformation occurs in this process. Meanings arise as dependent upon their subsidiaries, but then in the process of being experienced and indwelt they are sundered from their subsidiary roots and themselves become objects of thought or skills available to serve as subsidiaries. Most do not survive their window of availability, whether or not they form part of a chain of thought, but really interesting meanings are schematized within long-term memory, forming objects for recall, reflection, or construction. As lessons learned, they may be schematized within linguistic webs, or they may contribute to the inarticulate realm in the form of trick, signal or latent learning.

Often the flow of thought is fragmented, interrupted by intrusive signals, dying because of lack of interest, diverted by a nest of competing interests. Beyond the inevitable churning of meaning within daily life, though, looms the weighty question raised by thinking about how the notion of meaning applies to one's whole life, or perhaps better, is of experienced positive significance in one's life journey. Here we broach the issue, implied in the emotions accompanying meaning-making, of significance. In speaking of significance, one must go beyond the considerations addressed so far in this essay. Significance often has to do with an explicit or implicit assessment of how well one's thoughts and actions measure against the internalized beliefs, standards, and

values a person accepts. Significance is found wherever purposes, goals, and achievements are at stake. It is thus at heart a biologically-based type of felt measurement.

Significance is rooted deeply in our body as these comments suggest, for pursuing significance in life is a fundamental motivating factor. The transcendent values Polanyi often mentions are more than intellectual Platonic ideals. We respect the transcendent values because their significance grasps us within the course of an impassioned life; their power is not based on the weakness of subjective choice.

The deliberate aim of scientific enquiry is to solve a problem, but our intuition may respond to our efforts with a solution entailing new standards of coherence, new values. In the solution, we tacitly obey these new values and thus recognize their authority over ourselves, over us who tacitly conceived them. This is indeed how new values are introduced, whether in science, or the arts, or in human relations. They appear subsidiarily, embodied in creative action. Only after this can they be spelled out and professed in abstract terms and this makes them appear then to have been deliberately chosen, which is absurd. The actual grounds of a value, and its very meaning, will ever lie hidden in the commitment which originally bore witness to that value (Polanyi, "Creative Imagination," in R. T. Allen, ed., *Society, Economics, and Philosophy* [New Brunswick, NJ: Transaction Publishers, 1997], p. 263).

The degree of emotional involvement we feel with respect to the meanings we participate in offers a measure of the significance those meanings have for us. Langer appreciates the degree to which our inner life is imbued with an emotional tint. "[I]n human life practically every detail of memory or current impression has its own emotional charge . . ." (PS 72). However Polanyi moves beyond Langer's legitimate stress on the importance of emotional life, beyond her analysis of art as an expression of the forms of feeling, and in his discussion of ethics or more especially in reflecting on the nature of religion and myth, he addresses the issue of significance in life in its cultural setting.¹⁶

In the first section of this paper, it was suggested that a person may be seen as the center of radical responsibility. Polanyi's notion of ethics builds on this comprehensive sense of personhood, which underlies his whole program of personal knowledge. "Accordingly," he says, "moral rules control our whole selves rather than the exercise of our faculties, and to comply with a code of morality, custom and law, is to live by it in a far more comprehensive sense than is involved in observing certain scientific and artistic standards" (PK 215). We are responsible for the frameworks we indwell, for the standards we accept, for the models we emulate, for the values we affirm – even though these cannot be traced back to some free, rational choice we have made, even though our thought and action arises out of parochial sources and mixed motives. "Believing as I do in the justification of deliberate intellectual commitments, I accept these accidents of personal existence as the concrete opportunities for exercising our personal responsibility. *This acceptance is the sense of my calling*" (PK 322). Thus, like Langer, Polanyi does not fall prey to a voluntaristic theory of ethics. Nor does he have any illusion that a person can fulfill the high ideals the person finds herself committed to. For solace and support, Polanyi turns primarily to two sources: the good society and religion.

To outline the ways in which Polanyi believes society can work for and against an individual would take us far beyond the consideration of meaning enjoined in this essay. Both he and Langer appreciate the role that culture, with its many conventional symbols, plays in highlighting different sorts of significance. Let the following quotation from Polanyi serve as a reminder that epistemology, ethics, and finally meaning itself have an

unavoidable social dimension.

The ideal of a good society is in the first place to be a *good* society; a body of men who respect truth, desire justice and love their fellows. . . . It is misleading to describe a society thus constituted, which is an instrument of our consciences, as established for the sake of our individual selves; for it protects our conscience from our own greed, ambition, etc., as much as it protects it against corruption by others. Morally, men live by what they sacrifice to their conscience; therefore the citizen of a free society, much of whose moral life is organized through his civic contacts, largely depends on society for his moral existence. His social responsibilities give him occasion to a moral life from which men not living in freedom are debarred (*LL* 36).

For Polanyi, religious belief offers a suggestive intellectual solution to life's enigmatic character, and religious ritual and worship support that belief in embodied practices respectful of the wholeness of personal identity. His religious vision is basically a rather idiosyncratic version of Christianity in which the notion of God is what brings focal meaning to fragmented lives.

It is therefore only through participation in acts of worship – through dwelling in these – that we see God. God is thus not a being whose existence can be established in some logical, scientific, or rational way before we engage in worship of him. God is a commitment involved in our rites and myths. Through our integrative, imaginative efforts we see him as the focal point that fuses into meaning all the incompatibles involved in the practice of religion. But, as in art – only in a more whole and complete way – God also becomes the integration of all the incompatibles in our own lives (*Meaning* 156).

Does such a grand, integrative vision, one which is almost an apotheosis of meaning, make any sense? From a purely empirical point of view, probably not. But the meanings in which we dwell are always more than empirical or materialistic, as Polanyi insists in his ongoing battle against what he calls the absurdity of positivism and scientism. Both Langer and Polanyi honor the life of personal meaning making, even though it all too easily leads to yearnings that cannot be appeased. For when meanings are cloaked with ongoing significance stretching toward infinity, they shelter us from the stormy weather of daily life. Let the last word on this topic be Polanyi's:

Men need a purpose which bears on eternity. Truth does that; our ideals do it; and this might be enough, if we could ever be satisfied with our manifest moral shortcomings and with a society which has such shortcomings fatally involved in its workings.

Perhaps this problem cannot be resolved on secular grounds alone. But its religious solution should become more feasible once religious faith is released from pressure by an absurd vision of the universe, and so there will open up instead a meaningful world which could resound to religion (*TD* 92).

Endnotes

¹A notion of God may also, of course, be regarded as a center of the physical world, but a person accepting such a view would move beyond the naturalistic view that is responsible for the great advances in

scientific knowledge and technological prowess over recent centuries. To understand what occurs in the physical world, one need only take into account the various forces and properties comprising physics and chemistry or emergent from them. The introduction of any center governing these forces and properties not only violates Occam's Razor, it introduces emotionally tinged motives into cosmology that are other than an evidence-based quest to *understand* world processes.

²I am focusing this discussion on Polanyi's views, but Langer's thought also could be drawn upon to similar effect. For instance, she says that "living things exist by a cumulative process; they assimilate elements of their surroundings to themselves, and these elements fall under the law of change that is the organic form of 'life.' This assimilation of factors not originally belonging to the organism, whereby they enter into its life, is the principle of growth" (*FF* 66).

³The standard abbreviations are used for citations from Polanyi's work; see the bibliography for abbreviations for Langer's works that are cited..

⁴In biology, telic processes are tied to the good of the individual center, not to the functioning of the cosmic whole. Only in the most complex species does purpose take on a conscious, intentional dimension.

⁵Two quotations from Nobel Prize winning neurobiologist Eric Kandel (*In Search of Memory: The Emergence of a New Science of Mind* [New York: Norton, 2006]) may serve to represent the current findings of the many who have investigated the evolution of the brain and the rise of consciousness. "[S]pecific signaling molecules have been conserved – retained as it were – through millions of years of evolution. Some of them were present in the cells of our most ancient ancestors and can be found today in our most distant and primitive evolutionary relatives: single-celled organisms such as bacteria and yeast and simple multicellular organisms such as worms, flies, and snails. These creatures use the same molecules to organize their maneuvering through their environments that we use to govern our daily lives and adjust to our environment" (xii-xiii). Kandel denies that evolution works like an engineer (or the creator Paley postulates to explain the order of the earth): "evolution is not an original designer that sets out to solve new problems with completely new sets of solutions. Evolution is a tinkerer. It uses the same collection of genes time and again in slightly different ways" (235).

⁶Subsequent study of the brain's development tends to confirm Langer's suspicion of any piecemeal, structure by structure evolution of the brain. Terrence Deacon notes that, given the complexity of the brain's "wiring," it would be virtually impossible for a new structure to be added without disrupting the complex whole. However, the neurons of the brain can reach such distances via their axons and dendrites that a systemic approach to brain evolution makes sense. "Because axonal extension allows populations of cells located distant from one another in the brain directly to interact and influence one another, it superimposes a nonlocal developmental logic on top of the local regional differentiation that preceded it" (*The Symbolic Species: The Co-evolution of Language and the Brain*, [New York: Norton, 1998], 195).

⁷For those living beings having a central nervous system, Langer does acknowledge the usefulness of the concept of the being's Act Center – see *MI* 293.

⁸Psychologists have shown that there is a complexity to signals that Langer and Polanyi do not discuss. Classical conditioning involves a double-edged connection between a recognized input and a predictable result. The signal is seen as an expected causal agent or a revealer of reality, the point emphasized by Polanyi and Langer. The salivation of Pavlov's dogs is caused by their learned anticipation that food is consistently available following a bell. In contrast, sensitization and habituation are simpler sorts of signals not linked to any specific outcome; these sorts of signals alert one to pay attention to or instruct one to ignore what is signaled respectively. Sensitization is a psychological source of significance; habituation is a mechanism of forgetting, which frees the mind to focus on issues of significance. See Kandel, *In Search of Memory*, pp. 40-41.

⁹This is my view, one consistent with Polanyi. For reasons not entirely clear to me, Langer in her later thought denies that signals play an important role in the active response of animals to their environments (or

what she, following von Uexküll, terms their ambients – the species-specific affordances that make up the animal’s surroundings – see *MI* 282-283). She writes, “I am inclined to believe that signals, and especially communicative – intended and interpreted – signals, play a very minor part among even the highest non-human beings, if such devices occur at all; and that directly felt inward and outward acts, springing from impulse and ambient pressions and opportunities, are sufficient for all animal needs” (*MII* 137-138). This claim seems inconsistent with Langer’s view of signals in their broad sense as those signs that orient us to reality. Indeed, in her earlier thought she states that animal behavior rests on signal perception (*PNK* 267), the view assumed in this paper.

¹⁰In suggesting this alteration of Langer’s notion of presentational symbolism, I am essentially following Polanyi’s lead in claiming that “language should be taken from the start to include writing, mathematics, graphs and maps, diagrams and pictures . . .” (*PK* 78).

¹¹Polanyi’s notion of existential meaning is a human scale expression of what I am calling cosmic meaning. “All kinds of order, whether contrived or natural, have existential meaning. . .” (*PK* 58).

¹²“All animals engage in purposeful action . . . seeking food, mates, and the company of others. . . . Animals investigate novel and biologically significant stimuli as we do, ignore old and uninteresting events just as we do, and share our limited capacity for incoming information. . . . Do animals show all the observable aspects of consciousness? The biological evidence points to a clear yes.” (B. J. Baars, *In the Theater of Consciousness: The Workspace of the Mind* [New York: Oxford University Press, 1997], 33, quoted in Donald R. Griffen, *Animal Minds: Beyond Cognition to Consciousness* [Chicago: University of Chicago Press, 2001], 284-285)

¹³Here I use “articulation” in a narrower sense than that employed by Robert Innis in the accompanying article. He understands any combinatory or ordering acts as forms of articulation. Hence he views tacit, non-linguistic acts as examples of articulation, whereas I, following Polanyi, use the term “articulation” only for those conceptions and acts informed by language. Articulation is thus on my reading a distinctively human achievement.

¹⁴I have argued for the from-via-to schema in many settings, originally in “Polanyi’s Theory of Meaning: Exposition, Elaboration, and Reconstruction,” *Polanyiana* 2:4 & 3:1 (1992-93), 32-40.

¹⁵Polanyi calls his philosophy “post-critical” primarily because it aims to rescue such personal acts as believing and commitment from being regarded as merely subjective in contrast to the alleged superiority of critical (rational) objectivism (see *PK* 265-266). There is a second reason to call his thought post-critical that he does not articulate but is suggested by the difference between Kantian synthesis and analysis and Polyanian integration and evocation. In grounding his critical thought on pure reason and logic, Kant seeks to build his thought on indubitable foundations much as Descartes did. The grand themes of his architectonic – transcendental logic, the analytic of concepts, the analytic of principles, and his governing notion of the possibility of experience – all occur on the explicit level of focal rationality. Critical thought does not deal comfortably with the implicit or tacit dimension of thought; post-critical philosophy takes tacit processes seriously. Let me be clear: the culprit I am singling out is formal logic, not reason, for only through the level-crossing symbolism inherent in reasoning can the stratified nature of the cosmos be identified and different strata be indwelt. Classical logic and the criticism that flows from it exists on one plane only. Consciousness exists at several levels that are not encompassed successfully by Aristotelian logic – the awareness of which Kant begins to sense in his third *Critique*.

¹⁶Throughout his informative exposition of Langer’s thought, *Susanne Langer in Focus: The Symbolic Mind* (Bloomington: Indiana University Press, 2009), Robert Innis underscores the important role that the arts play for Langer in illuminating and supporting the feelings that embody significant living – see, for instance, pp. 154-155. For Polanyi, religion, ethics and the great hero (*SM* 95-97) play something of the role that the arts do for Langer.

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Acknowledgment, Responsibility, and Innovation: A Response to Robert Innis and Walter Gulick

Vincent Colapietro

ABSTRACT Key Words: Michael Polanyi, Susanne Langer, Robert Innis, Walter Gulick, acknowledgment, responsibility, innovation, validation, meaning.

This response affirms the content of the previous two articles but is focused on highlighting some features of Polanyi's and Langer's philosophies they do not emphasize. The rise of knowledge and trajectory of meaning Polanyi and Langer describe may be seen as incorporating a complex, innovative process of acknowledgment – of tradition, social norms, previous experience, and personal commitments of which one may not even be aware – for which one is responsible.

Introduction

My main objective is twofold – *first*, to get out of the way as quickly as possible, without allowing my haste to generate undue static or noise or, worse, to give the misleading impression of less than large admiration for the impressive achievements of our two speakers; *second*, to tarry just long enough to highlight what I take to be several *tacit* themes in these probing presentations. While I might to some extent tarry *with* the negative, insofar as considering matters otherwise than they have been conceived is in effect a negation what has been said, I have no intention of tarrying *in* the negative. Put alternately, my task here is constructive, not critical, and not even constructively critical: rather it is to join Bob and Walt as co-inquirers, in the same manner and spirit as they have joined Polanyi and Langer. Conviviality ought to be among us more than an empty word; it ought truly to be a personal aspiration and, to some extent, communal achievement.

Polanyi indeed invites comparison with any number of theorists, philosophical and otherwise (Terrence Deacon no less than Paul Grice or Ruth Milikan, Bahktin no less than Todorov or Kristeva), but some of these comparisons of course promise to be more fruitful and rewarding than others. As Bob and Walt have just shown, a comparison with Langer is especially worthy of painstaking elaboration and creative reframing. No one is more ideally situated to offer an instructive or illuminating comparison between Michael Polanyi and Susanne Langer than Walt or especially Bob.

Given the array of topics and wealth of details our speakers have brought into sharp focus, there are a number of particulars upon which I might concentrate (e.g., Langer's contested and, arguably, properly challenged distinction between presentational and discursive modes of symbolization). But, out of respect for both you, the members of the audience, and you, the speakers, I feel under no obligation to inform you of what you have just heard or to remind you of what you moments ago just said. You [speakers] have been admirably clear and you [audience] are unquestionably intelligent. *I do* however feel inclined to muse, for a moment at least, about themes on which Bob and Walt touched rather lightly – that is, on what their listeners might *not* have just heard, or (more accurately) have not heard emphatically expressed. Please do not take this to imply a note of criticism, only to prepare the way for interjecting several suggestions of my own regarding how to reframe our understanding of Polanyi and Langer. I take these suggestions to be in deepest accord with the not only the animating intentions but also the explicit formulations of our two speakers.

Acknowledgement, Responsibility and Innovation

These suggestions fall under three distinct but ultimately overlapping headings: *acknowledgment*, *responsibility*, and *innovation*.

(1) Acknowledgment. In *On Certainty*, Wittgenstein suggests: “Knowledge is in the end based on acknowledgment [*Anerkennung*]” (#378). Much of Stanley Cavell’s project is that of working out the implications of this apparently simple claim or suggestion. As his writings demonstrate, the task of acknowledgment is anything but simple and straightforward. It concerns (among other things) the creative appropriation of an inescapable inheritance and, thus, the dialectic between tradition and innovation. Acknowledgment also encompasses the drive to come to fuller and finer terms with the presuppositions and implications of our commitments. That is, it concerns what Bob identifies near the end of his paper as “the logic of commitment” (see p. 18).

In my judgment, what makes the writings of Polanyi and Langer so valuable, rewarding, and far from easy to assess or even comprehend is that both in their own ways undertake a strictly theoretical inquiry, but one interwoven with the task of *acknowledging* what makes knowledge possible. The *performative dimension* of even their most straightforwardly theoretical writings ought not to be overlooked especially by us, presumably sympathetic readers and creative appropriators. *I* (emphasized by our two speakers) at any rate am strongly inclined to insist upon an existential dimension being integral to their distinctive styles of theoretical inquiry. For each one this task is, in other words, ethical and arguably also political; for Polanyi at least, it is also religious or at least lends itself to being expressed in religious language. This task is irreducibly *personal* without being merely *subjective*. It is moreover *post-critical*, partly because it cannot be properly cast into *any* orthodox form of transcendental argument (even if it is in some crucial respects a descendent of this mode of argumentation or validation).

As Bob notes, the distinction between verification and validation is important and hence needs to be explored in more detail and depth than it has been thus far (see p. 18). The exploration of this distinction will, I suspect, drive us in the direction of confronting the task of acknowledgment, as both an irreducibly personal undertaking and a constitutively communal affirmation (for the *I* as a responsible agent is claiming – more likely, re-claiming – some historically evolved and yet evolving community as its matrix).

As Bob stresses, symbolization and experience – or articulation and experience – do not stand in opposition to other another (see p. 10). Even so, Langer’s construal of the *symbolic transformation of experience* might to some extent obscure the extent to which human experience, as a natural process, is an inherently semiotic affair. She might be more critical than post-critical, closer to the neo-Kantian tendencies of Ernst Cassirer than the post-Kantian thrust of Michael Polanyi. In general, the appeal to experience can never be naïve, for it is always motivated at a historical crossroad, for a critical purpose. The appeal to experience virtually always carries with it a reconceptualization of the very *meaning* of experience (what today counts – or, even more strongly, *must* count – as experience). Both Polanyi and Langer not only appeal to experience but also offer nothing less than a reconceptualization of its meaning, one calibrated to the work of validation no less than that of verification. The immediate relevance of this to our first theme is that, given the character of our experience, acknowledgment must always be, to some extent, a struggle against our disavowals and evasions, our compulsive denials and systemic occlusions. In noting this, we have in effect landed on the threshold of our second theme: responsibility. Our responsibility is radical, in extending to that over which we seemingly have no control.

Before turning to the second theme, however, please allow me a brief summation of my main conclusion regarding the first theme. The question of meaning cannot be reduced to verification (however critical the verification of our claims is in certain contexts), but must extend to validation. Validation itself must extend to the modes and depth of participation characteristic – indeed, constitutive – of *responsible* agents. Such validation requires the self-imposed task of acknowledgment. While knowledge is ultimately based on acknowledgment, acknowledgment is itself the *ongoing* task largely consequent upon those fateful ruptures and semantic upheavals in which our accredited modes of indwelling are rendered deeply suspect or, at least, debilitatingly self-conscious. Our *breaking out* of inherited frameworks of meaning is more often than not experienced by us as a *breakdown* of these frameworks, indeed, a collapse of our world as we have known it but without for the most part *acknowledging* it. Our responsibility hence extends to the work of reparation and renovation, just as the work of acknowledgment enjoins such responsibility.

(2) Responsibility. We hold ourselves responsible for what we have uttered. So, too, we hold others accountable for what *they* have uttered. The only legitimate forms of human authority are forged and refashioned in such complex networks of mutual accountability.

As Polanyi was fond of reminding us, we always mean more than we say. But we not only always mean more than we say, we also are often forced to acknowledge (as Hegel notes) that we meant something other than we intended (*PhG*). We are responsible for both the meanings transcending our conscious intentions (we are responsible for more than we consciously mean) and the very frameworks in which meaning can alone be articulated – indeed, we are responsible for nothing less than the world as the ultimate matrix of self-transcending and self-transformative modes of utterance and articulation. Personal acknowledgment and cosmic responsibility (responsibility for the cosmos, especially as the matrix – the womb – whence meaning springs and the contexts in which meanings evolve) are, for Polanyi and arguably also for Langer, intimately connected. Here I remind you of Polanyi’s *The Study of Man*, not only “The Calling of Man” but also the following chapter (“Understanding History”). While this might not be so readily apparent in the case of Langer, there are at least indications in her writings (e.g., *Philosophical Sketches* and concluding chapters of the third volume of *Mind*) where she seems to be moving in the direction of a position more fully – at least more explicitly – espoused by Polanyi.

The question of meaning must ultimately be framed or, more precisely, reframed in terms of considerations of responsibility. In turn, responsibility must be conceived in terms of our response to various forms of alterity, not least of all what is other than what we are disposed to think or equipped to conceptualize; moreover, it must be conceived in terms of holding ourselves and others accountable for nothing less than the world as a matrix of meaning and meaning-making, hence meaning-improvisation.

(3) Innovation. My third theme is innovation or improvisation. Meanings made – those consolidated and integrated in recognizably useful and valid patterns – are for both thinkers ultimately in the service of *meaning in the making*. I take all three points of emphasis (acknowledgment, responsibility, and innovation or novelty) to be congruent with what each of you either assert or imply, with different emphasis (that is, I take any of this to be in deepest accord with the animating purposes of your papers). Creativity might be either subsumed under novelty or added as a topic in its own right. In either case, the question of meaning is, for Polanyi no less than Langer, as much a question of creativity as anything else.

Any theory of meaning articulated in the spirit of these thinkers must, in the end, stress the form of emergence so prominent in all the diverse modes of human articulation – the emergence of genuinely and dramatically novel modes of articulation, not infrequently ones transforming the very frameworks of meaning in which we have dwelt (indwelt) prior to the eruption and thus disruption of such novelty. That is, the question of meaning is ultimately one with the question of innovation and creativity.

Conclusion

In the end, we are forced to *acknowledge* the limits of formalization and, arguably, also certain genres of theoretical discourse (in particular, those fixated on formalization and classification, taxonomies and hierarchies). This is so even when these formalizations and classifications are, at bottom, functional. In working toward a truly pragmatic acknowledgment of the performative dimensions of our theoretical undertakings – toward practically *acknowledging* what we are *doing* when we are making these claims in this fashion or those in that manner – we are (I suspect) driven toward theorizing in a manner not adequately avowed by either Polanyi or Langer. The resources of Hegel, Ricoeur, Foucault, MacIntyre, and Butler (to name but a handful of the most obvious exemplars here) need to be more fully deployed, the turn toward history and thus toward narrative more decisively taken. But this is itself a story – indeed one about theorizing as a mode of narration or, at least, a mode of discourse in which narration is critical, truly critical – for another occasion.

On this occasion, suffice it to say Robert’s opening question (“Why would, or even should, someone deeply interested in the work of Susanne Langer turn to Michael Polanyi’s work for insight as well as perhaps an intellectual challenge – and vice versa?”) has been effectively addressed by Walter as well as by Robert. In turn, Walter’s central focus – the nature of meaning – has been radiantly illuminated by Robert no less than Walter himself. And suffice it to conclude by asserting that my own response to their papers has aimed at exemplifying what it has thematized (at least, what it has tried to render explicit and central) – the task of acknowledgment, the exercise of responsibility, and our irrepressible drive for symbolic innovation.

Submissions for Publication

Articles, meeting notices and notes likely to be of interest to persons interested in the thought of Michael Polanyi are welcomed. Review suggestions and book reviews should be sent to Walter Gulick (see addresses listed below). Manuscripts, notices and notes should be sent to Phil Mullins. Manuscripts should be double-spaced type with notes at the end; writers are encouraged to employ simple citations within the text when possible. MLA or APA style is preferred. Because the journal serves English writers across the world, we do not require anybody’s “standard English.” Abbreviate frequently cited book titles, particularly books by Polanyi (e.g., *Personal Knowledge* becomes *PK*). Shorter articles (10-15 pages) are preferred, although longer manuscripts (20-24 pages) will be considered. Consistency and clear writing are expected. Manuscripts normally will be sent out for blind review. Authors are expected to provide an electronic copy as an e-mail attachment.

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From Science to Morality: A Polanyian Perspective on the Letter and Spirit of the Law

Charles Lowney

ABSTRACT Key Words: Polanyi, Aristotle, post-critical epistemology, meta-ethics, emergence, phronesis, deontology, virtue ethics, indwelling, traditions.

Looking at the moral law from Polanyi's post-critical epistemology and emergent ontology reveals two interconnected roles for the letter of the law and two ways in which it can oppose the spirit of the law. For the moral student the law is a procedural method, for the moral virtuoso the law is an incomplete explicit expression of a tacit way of being. The two are connected in that procedural rules and practices set the basis for understanding and experiencing an emergent reality. This reality is embodied in the exemplars of a moral tradition and expressed in its principles and maxims.

Polanyi's analysis of knowing as a skill that is dependent on tacit knowledge, his appreciation of the heuristic nature of the question and the emergence of an answer in a discovery, and his understanding of the intentional from-to structure of experience, all apply to moral knowledge as well as scientific knowledge. It is my conviction that the epistemological and ontological framework that Polanyi begins to develop is capable of unifying Aristotelian, Kantian, utilitarian, sentiment-based, intuitionist and religious ethics in a vibrant, forward-focused synthesis.

In this article, I will begin to excavate that framework and show how it can be applied by using Polanyi's philosophy to address a puzzle in moral philosophy: the tension between following the letter of the law and following the spirit of the law.¹ The Kantian notion that the moral law should be followed regardless of consequences, and the utilitarian notion that the laws should be made and even bent to advance a goal, reflect a tension that moral agents sometimes feel between following the letter of the law and following its spirit. Showing how Polanyi's philosophy addresses this tension reveals that the good person achieves a way of being that answers questions inherent in the human condition. It shows how following moral maxims and principles can both be a method to transform oneself into that way of being and provide knowledge of reality. It also sets the theoretical groundwork for understanding how one can dwell in various moral principles or even transcend them.

I. The Ethical Life as a Skilled Way of Being

Polanyi's analysis of knowing as a skill that is deeply funded by tacit knowledge will help to solve the puzzle expressed in the notion of the spirit *versus* the letter of the law. Looking at how knowing works in the sciences and its similarity to how knowing works in the crafts, will show how moral knowledge is achieved and advanced in a Polanyian perspective. It will also bring out strong connections between a Polanyian moral philosophy and Aristotelian virtue ethics.²

1. Scientific and Craft Knowing

For Polanyi, "all knowledge is *either tacit or rooted in tacit knowledge*" (KB, 144). Even the theoretically explicit knowledge of science is the focal blossom of a fund of tacit experience and knowledge that is working

subsidiarily as its ground. In *Personal Knowledge*, Polanyi shows that scientific knowledge is the product of a craft, supported by a community of participants who share experience and skills and who are thus able to competently make valid judgments.

In order to properly develop and exercise the skills of a craft, one must learn its tacit as well as explicit knowledge. An important element in the education of the scientist is thus the impartation of tacit knowledge through guided participation in the activities of the craft. Polanyi's epistemology thus brings out the importance of a novice-expert, or apprentice-master, relationship in gaining scientific knowledge.

In order to become a scientist—or in order to become a glassmaker, a shipwright or a house builder—the model for passing on knowledge is one of apprenticeship. One listens to the instructions of the expert craftsman, one observes and imitates, and one practices performing the skills of the craft. Learning involves both explicit instruction and hands on experience. Only after a period of apprenticeship does one know how to apply the rules/laws correctly in new situations and develop the sensibility to recognize the value of new achievements. There are textbooks and trade manuals, but one needs experience with the equipment and procedures before one is qualified to produce scientific knowledge and make responsible judgments in a particular field. Polanyi thus discusses the importance of hours of laboratory training as one of the means by which the tacit knowledge of the scientist, and the knowledge embedded in the community's shared practices, are passed on to a new generation (*KB*, 106-107; *PK*, 53). One must collect certain experiences under the guidance of an expert in order to come to understand the significance of a particular procedural rule or scientific law or experimental result, and to weigh its strengths and possible implications.

In the process of learning, the novice inevitably misunderstands the instructions and rules given by the master, because he lacks the tacit knowledge of the master. As the novice makes mistakes and receives corrections, he is better able to understand and apply rules. Through repeated performances, the apprentice acquires the tacit background knowledge that gives him a new understanding of the explicit dialogue engaged in by the community's experts.

The novice achieves competence and then moves on to achieve the excellence of an expert. At each stage of instruction, the rules may play a different role. The novice may follow rules blindly to correct particular behaviors and achieve the right sort of practice, but the expert comes to see the rules as explicit renditions of knowledge that best works tacitly. A trade may have its secrets, but Polanyi shows that the expert is not necessarily withholding knowledge intentionally from the apprentice; certain aspects of a craft cannot be formalized and even the best, explicit renditions of techniques can be misunderstood. If an explicit statement of knowledge is withheld, it may not be that the community of experts is exercising political cunning to consolidate its power. The reason might be that the uninitiated do not yet have the tacit coefficients necessary to properly understand the statement. The novice is likely to misunderstand such a statement in a way that hinders rather than helps his understanding of the craft.³

As Polanyi says, “[A]ny rules laid down for carrying out empirical inferences must be highly ambiguous” (*PK*, 370). Here Polanyi recognizes what Wittgenstein also recognized in his discussions on rule-following. If one does not have the right sort of experiential background and training, a rule can always be misapplied, and an explicit sign can *always* be taken the wrong way.⁴

Skills are built through a dialectic of performance and analysis. A performance is an act of synthetic

integration that relies on subsidiary operations and clues. But performance can be improved when it is analyzed into parts and processes. A particular part can be made explicit and trained separately before it is integrated back into synthetic performance. For instance, a pianist might practice a particular chord, or a boxer might practice a particular punch. In the dialectical progression of performance and analysis, the rules usually emerge as an artifice of the analysis and show a caricature of the actual integration at best. The rules are also not part of the focal awareness of the master craftsmen when they are engaged in full performance. The expert pianist or boxer performs without attention to the rules, but focuses ahead to the general result desired. Rules at this level are part of an explicit rendition of how we get to where we are going. In order for the subsidiary skills or clues to function as they should in synthetic performance, the rules must, in a sense, be forgotten. Playing the piano or boxing with a focus on the rules might be a technically precise failure rather than a beautiful accomplishment.

For Polanyi, since so much of the training in a field is embedded in practices and communicated tacitly, we must trust the judgment of the expert. The seasoned scientist has the tacit background to understand scientific laws and can use their knowledge subsidiarily in the service of discovery. The seasoned doctor, for example, has the experience to tell the difference between a real epileptic seizure and a hysterical epileptic seizure (*KB*, 123). A novice following his rulebook might mistake the episode and do the wrong thing, such as prescribe a wrong treatment.

“Rules of an art can be useful,” says Polanyi, “but they do not determine the practice of an art” (*PK*, 50). In practicing the skills of a craft, rules and principles have their primary value as learning tools, guideposts and reminders for novices and those reaching a level of basic competence. To say, as Polanyi suggests, that rules or principles themselves are “dwelled in” or “interiorized” (*M*, 62; *KB*, 214) might even reify them a bit too much. Procedural rules are a way of articulating aspects of subsidiary awareness, but rules may also be entirely discarded. At the level of competence, the rules still may be heavily leaned upon, but once one has achieved expert status, rules may be violated in the service of the goals of the craft. In the craft of shipbuilding, for instance, the master’s focus is on building a good ship, and if she attempts to build a ship better than one ever built before, her efforts might violate the existing rules of construction and design, but would still be in service of the trade’s purpose. A true expert can be an innovator who breaks the customary rules of the craft to produce new and better results—and Polanyi would maintain that these results *should* be appreciated by those who achieve the expert’s level of knowledge in the field (“*CI*,” 264).

While crafts may focus on procedural rules for the production of a performance or artifact, sciences seem to move beyond procedure and performance to acquire knowledge of nature. In science there does seem to be a difference between (a) procedural rules about how to investigate, compile and interpret data, or even skills at forming and pursuing hypotheses, and (b) scientific laws as an expression of the product, i.e. as a body of knowledge that answers questions about existence. At first glance, artisan rules and knowledge seems to align more with the former than the latter, but the two are entwined in a view of nature in which knowing and being are intimately connected. Polanyi shows that the former are required to fully understand the latter and may even be constitutive of it. The laws are explicit renditions of achievements, and those achievements might then be dwelled in and used toward further discovery.

In moral knowing, the scientist’s focus on producing knowledge of nature, and the artisan’s focus on producing a good performance or product come together. For Polanyi, moral laws and values, like scientific laws and facts, catch and express objective features of reality (*KB*, 33). They also guide one in a way of living that results in a product with real qualities: the good person.

2. Moral Knowing and Training

Moral knowledge, like scientific knowledge, is similar to an artisan's knowledge. Aristotle's recognition of practical wisdom, or *phronesis*, as an essential moral virtue emphasizes these similarities. *Phronesis* is a skill that requires tacit knowledge. It requires experience both in order to develop its principles and to properly apply them to particular situations. It is a bottom-up knowing rather than a top-down knowing.⁵

For Aristotle developing *phronesis* requires practice, and the right kind of practice, just as, for Polanyi, developing the ability to reason and evaluate in the sciences requires the right sort of experience. Aristotle notes that to be good at mathematics, or to have theoretical knowledge, does not necessarily require extensive life experience of particular sorts, but being a good judge does require it (*NE*, 1095a). Also, whereas we would want a doctor to have experienced suffering and empathize with the sufferer we would not want a judge to have participated in evil and have too much empathy for immoral actions. Having the right sort of experience is important for the person of practical wisdom; the right sort of experience helps the person develop the ability to reason and judge well, and it also helps him develop the right sort of feelings. With the right feelings, the person of practical wisdom thus makes the right decisions effortlessly and performs the right actions willingly.⁶

As in the crafts and sciences, the moral novice achieves moral excellence by engaging in practices that develop his ability to reason well in matters of action. Moral excellence, however, is broader and deeper than excellence in any particular craft or scientific field; it is a skill for living that involves a comprehensive way of engaging with the world and acting in it in a masterful manner. The moral virtuoso does the right thing "to the right person, in the right amount, at the right time, for the right end, and in the right way" and doing so he practices virtue (*arête*) or excellence (*NE*, 1109a 27-30; 1106b 20-25). He achieves excellence, not just in performing a particular task, producing an artifact, or building a body of knowledge, but in living—and the chief product is the actualization of his own being.

Living moral excellence is a complete way of being for Aristotle. Polanyi agrees, hence he can say, "[M]oral rules control our whole selves rather than the exercise of our faculties, and to comply with a code of morality, custom and law, is to live by it in a far more comprehensive sense than is involved in observing certain scientific and artistic standards" (*PK*, 215).

Seeing moral knowledge as a skill at living well brings about implications that Aristotle recognized: it involves having a virtuous character, which for Aristotle involves having the right education or upbringing (i.e., the right sort of experiences), and the right feelings, as well as the right knowledge and judgment. To become a virtuous or excellent person, for instance, one must be raised in a city with the good laws (*NE*, 1102a) and one must respect the right sort of people as exemplars of the right sorts of actions to emulate. As Polanyi says, "By recognizing our heroes and masters we accept our particular calling" (*SM*, 98; see also *KB*, 136). Stories or parables with the right moral message are also important for training moral sensibilities, since much tacit information is embedded in the details of the story and this supplements the moral message. Simply stating the message would not only invite misinterpretation, it would not have as deep an effect on the sentiments.

Having the right feelings is important, because sentiments not only facilitate judging a situation appropriately, they allow one to respond willingly with the right action in the right way and for the right reasons. Training the emotions is also important because, in virtues of character, the virtue itself is predicated on having

the right feelings (*NE*, 1106b). For example, in exercising courage one needs to feel the right amount of fear and in being modest one must feel the right amount of shame.⁷

Having the right feelings is integral to having the right character. Moral action comes from a state of virtue, or what we might call a disposition to virtuous acts, with its attendant feelings (*NE*, 1105b, 1106a). The character, not the individual virtuous acts, determines whether or not a person is virtuous. One might perform virtuous acts by merely following rules, but this does not guarantee that the character is virtuous. The two, however, are intimately connected. As Aristotle notes, when virtuous acts are repeatedly performed over time, the character can become virtuous. Becoming a virtuous, excellent person involves *practicing* the virtues; it involves training, repeated performance, and correction. The correction might be administered by a master; or perhaps by a more advanced student, e.g., by a fellow citizen who has achieved competence; or by the judge who interprets the laws, i.e., the moral rules sanctioned by society.

The skills one develops through practice are grouped into particular moral virtues, such as courage, moderation, justice, and generosity. The overarching skill needed for the proper execution of the particular moral virtues is the intellectual virtue of practical wisdom. One must have all the virtues of character in order to have *phronesis* and if one has *phronesis* one will have all those other virtues as well (*NE*, 1144b). *Phronesis* and virtue, judgment and experience, advance together in dialectical progression.⁸

3. Moral Excellence is Embodied and Cannot be Reduced to Rules

Moral rules, maxims and principles emerge from engagement in virtuous practices. For Aristotle, the virtues are human excellences that cannot be reduced to rules, but rules can serve as guidelines, hence following good laws can guide one toward virtue. For instance, one might have it as a rule of courage that one should never desert from a battle. But there may be occasions in which desertion might be the morally right action to perform (perhaps one's commander has broken ranks, or one finds oneself on the wrong side of an unjust war, or some other unforeseen circumstance occurs). When faced with such a situation, the morally virtuous person feels the right impulses and knows the right thing to do; he has the excellence of practical wisdom and knows which moral principles apply to the particular situation and how to apply them correctly. Aristotle, like Polanyi, recognizes that there is no determinate rule, or complex of rules, sufficient for applying a rule of practical wisdom.⁹ This builds a strong connection between Aristotle and Polanyi's conception of the authority of the expert.

For Aristotle, the ultimate arbiter of morality is the *phronimos*, the person of practical wisdom. His way of being issues in right actions and he is the ultimate judge. The person with practical wisdom does the right thing at the right time in the right way, largely based on tacit knowing. As in the crafts and sciences, any rule might be misunderstood or misapplied. The authority of the expert, as the bearer of knowledge by virtue of his experience and character, is indispensable.

Just as a scientific text or a trade manual is a poor guide to achieve mastery in a particular field, so moral rules and explicit systems of morality are poor guides on their own for becoming a moral virtuoso. Moral rules or principles may be expressed directly by the virtuous person, as a doctor might write a medical textbook, or they may be our own attempt to catch and systematize an excellent person's way of being, as in the accounts of the gospels. By reading the works of a master, or cataloguing the exemplar's actions and generalizing what he has done, we can form useful general principles, such as "do not kill," or "never be unnecessarily cruel," or "love one another."

In virtue ethics one asks, “What would the virtuous person do?” In Christianity one asks, “What would Jesus do?” We might guess, with universal intent, what the master would do in a novel situation, but we might very well be wrong. The good person sees what we do not because his character has been developed in the right way and ours might be askew. We may lack the practical wisdom essential to fully understand the principles and their proper application. Also, since the self is part of the product, what is right for the virtuous person at his stage of character development might be wrong for us.¹⁰

The virtuous character is such that the inclination of feeling is in line with the correct moral action; his “spontaneous” feelings can be reliable guides to right actions. Acting on his/her feelings is one way a virtuous person might be said to follow the spirit rather than the law. For the virtuous person, mastery is such that feelings work in accord with the goals of the law. The good person’s actions, however, are so embedded in tacit knowing that his own judgment of *how* he knows might be wrong. What is obvious for him, or fundamentally tacit, might not make it into the explicit text or manual, and even if it did, chances are it would not help us. Some masters are better at doing and performing rather than analyzing and making knowledge explicit transferable.¹¹ This is one of the reasons why apprenticeship is so important, the master craftsman cannot always tell us how he does what he does, but if we do as he does with his guidance, we will learn what he knows.

The person of practical wisdom is similar to the master craftsman or scientist in that neither can make his or her knowledge fully explicit in general rules or instructions, but both can be a role model and provide guidance or education. The master craftsman-apprentice model of knowing is thus especially applicable to moral knowing, since it encompasses a comprehensive way of being. We don’t merely rely on the person of practical wisdom, we seek to become like him or her. We emulate moral heroes and seek to shape our character so that we too are able to—as if by instinct or intuition—do the right thing at the right time to the right person in the right manner for the right reasons—and enjoy so doing.

II. Ways of Being Embody Answers to Heuristic Passion

The way of being of the good person constitutes an answer to questions about the human condition. The good person builds his character and solves problems that new situations bring by actively engaging in an ever-changing world. But the good person is also a product of a tradition. Virtuous engagement with the world produces a body of moral knowledge and values that finds expression in a system of moral laws; and a system of moral laws, in turn, helps to produce virtuous people.

1. Superior Knowledge and Traditions of Inquiry

Where does the moral virtuoso’s knowledge come from and to where does it proceed? For Aristotle the setting and precondition for the person of virtue is the *polis*. The virtuous person is typically supported by the fund of knowledge and standards available to him through his culture and tradition, just as the scientist is supported by the fund of knowledge in his community and its history. This common fund of knowledge and accepted standards are what Polanyi calls “superior knowledge.”

Take two scientists discussing a problem of science on an equal footing. Each will rely on standards which he believes to be obligatory both for himself and the other. Every time each of them makes an assertion as to what is true or valuable in science, he relies blindly on a whole system of collateral facts and values accepted by science (*PK*, 375).

Science is “a coherent system of superior knowledge, upheld by people mutually recognizing each other as scientists, and acknowledged by modern society as its guide.” Superior knowledge is a “mediated consensus” that also contains dissenting voices. And not only science, but “the entire culture of a modern, highly articulate community” is a form of superior knowledge, even though “only a small fragment of his own culture is directly visible to any of its adherents” (PK, 375).

Alasdair MacIntyre discusses the importance of being a member of a moral tradition of inquiry in order to understand and reason about morality properly. The very intelligibility of a moral statement or law presupposes the background knowledge gained by participation in the knowledge and practices of a community.¹² MacIntyre’s views here can be seen as a valid development of Polanyi’s understanding of tacit knowing, superior knowledge, and heuristic passion.¹³ For Polanyi, “A dialogue can be sustained only if both participants belong to a community accepting on the whole the same teaching and tradition for judging their own affirmations. A responsible encounter presupposes a common firmament of superior knowledge” (PK, 378).

MacIntyre’s emphasis that the *rational coherence* of moral statements depends on a tradition of *inquiry*, along with Polanyi’s emphasis on *intellectual and moral passion*, show us that the accumulated reservoir of traditional, scientific and moral knowledge is an achievement driven by deep and consuming meaningful questions that ignite our passion and set the imagination in search of discovery. Traditions are an ongoing dialogue about fundamental and evolving questions, and the answers that are given are accepted as authoritative only within the rational context that allows for the intelligibility of certain possible answers: Wittgenstein says, if a lion could talk we could not understand him (PI, 223); Polanyi says that if we could be transported to a library 1000 years in the future, we would not be able to understand its contents (*Logic of Liberty*, 198-199).

The excellent person had the right upbringing in the *polis* and most important to that upbringing was an education in good laws.¹⁴ By being raised with good laws, moral rules, and customs, the virtuous person dwells in and internalizes the moral ideals of his community, not just in theory but in practice. His way of being therefore embodies answers to questions that have arisen for that society over time, and he himself is an answer to questions about the right way to live that emerge from his biology, practices and tradition. The intellectual and moral achievements of a culture or tradition also catch explicit answers to questions about what it means to be a human being more generally, which may point to a common core morality or a common way of being an extraordinary human being.

2. The Emergence of Moral Knowledge and Sentiment

From an Aristotelian and Polyanian perspective, one can see how a fund of tacit and explicit knowledge emerges in a tradition. The questions, and the passion driving the questions, are integral to the solutions that form the body of knowledge embedded in a scientific, moral or religious tradition as they evolve over time.

For Aristotle, the person of practical wisdom, who has the right experiences and feelings, develops the ability to formulate a moral rule and has the proper judgment to know how to apply it. There is an *epagoge*, or induction from the particulars of experience, to *archai*, or first principles which are revealed to *nous*, or intellect (NE, 1142b1-5).¹⁵ These principles might then be grouped into rules for particular virtues and then practical wisdom, *phronesis*, allows one to navigate and weight principles or virtues amongst one another and know what

general rule applies to what particular situation.

Polanyi's epistemology provides for a similar induction from experience to principles, described as the tacit inference *from* particulars *to* joint comprehensions.¹⁶ But Polanyi, in contrast to Aristotle, also provides for the emergence and discovery of new values in the course of history, and points to ever higher levels of inductive integration. Polanyi's description of discovery brings about the following picture of how Aristotle's *epagoge* works to bring us a fund of moral knowledge.

A person, with his or her body and background experience, encounters an event, and with the experience of the event, and others like it, comes a feeling that drives the moral passions (perhaps one witnesses the killing of a fellow human being, and is horrified). The person may judge those sorts of events as good or bad with universal intent immediately, or questions may be evoked, that persist as deep and complex moral dilemmas (perhaps the killing is a legal execution). The person may carry this question with him for a long period of time, just as one may carry and incubate a scientific problem for a long period of time before a discovery is made. "Such a quest can go on for years" ("CI," 261). With the focal goal of an answer, evidence and experience is collected that helps to move the person toward resolution. A new value or maxim might then emerge as the joint comprehension of the experience and provide a solution to the dilemma. This solution also comes with a feeling and can act as the premise of a moral judgment. The value or rule (perhaps expressed as "a life for a life", or maybe "all life is sacred") can act as a summation of this gestalt; it provides the explicit aspect of the new integration. The person then understands the particular acts and events in terms of the meaning that the new moral maxim helps make explicit. If the question causes a radical enough shift, a whole new interpretive framework might emerge with the solution. And a shift in the interpretive frame at the level of morality entails a shift in mode of being of the whole person.

When we modify our judgments about anything, we make subsidiary use of certain new principles—which is to say, we dwell in them. Because of the circumstances we actually make existential changes in ourselves when we modify our judgments. For we literally dwell in different principles from the ones we have been at home in, and we thus change the character of our lives (*M*, 62).

In Polanyi's view, our feelings can guide us to answers. They can provide anticipations of what is true and right and can give voice to knowledge held tacitly. Polanyi affirms this in recognizing the role of anticipatory intuitions in creative discovery in science and in recognizing the feeling of heuristic satisfaction that validates a discovery as genuine ("CI," 262; *KB*, 149; *PK*, 320-321).¹⁷

Feelings have an important place in understanding whether and why something is right or wrong. Both thoughts and feelings can be joint comprehensions of meaning focally experienced, but feelings are not strictly divorced from thoughts, and feelings and intuitions are not the rock bottom foundations that sentiment-based or intuitionist theories maintain. Sentiments can be the felt accompaniment of prior judgments as well as be the basis of future judgments.¹⁸ For Polanyi, there is always subsidiary tacit knowledge and experience at work even in a raw feeling or a core moral intuition, even though such may present themselves, as any focal experience does, as unitary and immediate. Polanyi describes this apparent immediacy as resulting from the *vectoral* quality of tacit integration that takes us from the clues to the focus without direct awareness of those subsidiaries; the clues that we attend from "become, as it were, transparent" (*KB*, 145). Some sentiments or intuitions are more basic to human ways of being than others, but practices help make feelings, and as we learn what the right thing to

do is, we re-evaluate our feeling in terms of the new meaning that we give those sorts of events. In fact, simply reevaluating an event in the light of a new meaning will change the feeling that the event evokes. For example, feelings will change when one first sees a killing as a brutal murder, then as an act of justice, and then as a violation of the sacred.¹⁹

We move *from* particular experiences *to* a joint comprehension that is expressed in a maxim, and then we use that joint meaning to understand and judge experiences. This same sort of integration and judgment is seen with regard to concept formation, and judgments of fact. For example, we move from experiencing particular human beings to understanding the joint comprehension of the concept or essence *human being* (*KB*, 165-168). We then judge the particulars we encounter in terms of this joint comprehension, which provides a “new standard of coherence” (“CI,” 262). We can look back through the lens of the concept *human being* to decide whether or not something qualifies as being human. We can even work back and forth between particulars and their integration as we decide, for example, whether a human’s capacity to reason, to feel, or to be responsible is the essential defining trait of being human.

So there is actually another step to the *from-to* process in which the *to* is now seen *through*, i.e., the focal *to* submerges to act as a subsidiary lens through which we understanding the particulars from which we started. It is a *from-through-to* structure—we dwell in the meanings given by higher levels of integration and they are seen *through* in order for us to understand the lower level constituents of an integration: we see the clues in a new way.²⁰

This ascending *from-through-to* structure of tacit integration gives us a model for the successive emergence of moral rules to the highest moral principle in a moral system. From experiences, different moral maxims emerge and then questions are raised about consistency between different rules, priority of one rule over another, and which rules apply to what sorts of situation. And so we move *from* different maxims *to* a higher moral principle as a joint comprehension that helps us to order and weigh maxims and helps us to judge when a particular maxim should be applied or when it should be trumped by another. Through experience, debate and discovery, we move from disparate moral feelings to a guiding maxim, and from guiding maxims to the comprehensive moral systems of traditions of inquiry.

But the questions and the discoveries raised by engagement in human existence are not always capable of being articulated in explicit propositions or commands. Moral heuristic passion strikes deeper and more comprehensively than intellectual heuristic passion. Moral questions and paradoxes evoke answers not only in the form of explicit statements or doctrines. Rituals or even mysteries can provide a heuristic satisfaction in a way that is not always rationally explicable.

For Polanyi, even some explicit doctrines may not have a literal truth but may have a metaphorical or symbolic truth that cannot be reduced to explicit statements of knowledge. For instance, Polanyi discusses how reciting the Lord’s Prayer might express a deep consummation of his own being even though he does not believe the sentences of the prayer to be true literally.²¹

Questions about the relation of the individual and her good weighed against the good of the community may receive an answer in the form of an explicit constitutional right. Questions about deeper human striving and the meaning of life may get an answer in the form of a ritual practice (such as a Hindu cleansing ritual) or a doctrine (such as the sacredness of all life). Questions about the relation of the human to something transnatural or divine

might find its answer in a dogma or mystery (such as the Christian doctrine of the incarnation of Christ).²² Questions about human suffering might find an answer in an experience of enlightened liberation.

3. Moral Knowledge Articulates Reality

For both Aristotle and Polanyi this process of moving from experience to principles is a discovery of the objective reality of nature. For Polanyi, moral values emerge, but they are personal and not merely subjective; they are held with the same universal intent and they command the same commitment as a scientific claim to truth. Polanyi says, “[T]rue human values exist” (*KB*, 33).

Intellectual and moral achievements are personal achievements made by people who are committed to doing the objectively right thing and avoiding the objectively wrong thing. Polanyi says, “Like the artist and scientist, moral man strives to satisfy his own standards, to which he attributes universal validity” (*PK*, 214). Polanyi’s conception of universal intent brings out strong Kantian notions of duty and a commitment to universally applicable standards.²³ There is thus a dimension of moral law as a command that express a truth about human reality which demands our recognition and submission.

For both Aristotle and Polanyi, different societal backgrounds provide a place from which to begin our search for moral satisfaction, but this does not entail that different opposing moral values are equally true. Aristotle’s emphasis on upbringing and Polanyi’s emphasis on superior knowledge point to the notion that some people might be in a better position to apprehend moral truth than others. For Aristotle, the discovery of a first principle is an unveiling of reality. Similarly with Polanyi, our personal knowing can give us access to the truth of being. For Aristotle there was one trajectory for an eternally fixed human nature and there was only one possible interpretive framework. Polanyi’s model is one of multiple and progressive interpretive frameworks and the emergence of new ways of being, but the Kantian undertones in Polanyi’s notions of commitment and universal intent suggest the same sort of discovery in an emergent reality for morality as we have for science.²⁴

To the extent that we share a common human nature and have common problems, there is the possibility of a comprehensive moral standpoint that catches common human truths. And if there is such a thing as a common human desires and goals, a higher level moral integration might reflect an emerging human reality. In Polanyi’s view, there is a coordination of our achievements in knowing with the changing structures of an emerging world. Knowing seeks being through heuristic striving.

III. The Spirit and the Letter of the Moral Law

In examining morality from a Polyanian perspective we have seen that the letter of the law has two main functions and can be in tension with the spirit of the law in at least two ways. The primary goal of following the letter is the transition to a richer way of being that is embodied by the good person, i.e., the moral virtuoso. Moral maxims and laws can thus act as procedural rules for novices, but when the novice is fully initiated he can transcend the rules and perform moral actions with the same universal intent and freedom as the master.

From this perspective practicing the letter of the law is a pedagogical and behavior modifying tool that

helps to bring one up to the joint comprehension out of which the master lives, which is the locus of the spirit. While the letter of the law is the safest bet for the novice, the spirit of the law takes precedence for the master, and laws may even be broken for the good.

We have also seen that, in addition to being a method for achieving a way of being, a system of moral laws can express a body of knowledge that has a claim to objectivity. The practices and rules set the basis for understanding and experiencing an emergent moral reality. This reality is embodied in the exemplars of a moral tradition and expressed in its principles and maxims. Here the tension between the spirit and the letter of the law results from the incomplete nature of letter of the law itself, which is the explicit expression of a tacit fund of knowledge. When we achieve moral mastery, we do not dwell in principles or rules, we dwell in the way of being of a person, and the principles and rules are merely our best explicit grasp on that comprehensive meaning (see *KB*, 136).

As one develops from being a moral novice to being a virtuous person, one develops a different relation to rules, maxims, and principles. Whereas for the novice the tension between the spirit and the letter of the law may result from ignorance in understanding or applying the law or weighing its competing maxims, for the expert the dissonance is between the law as an explicit expression and the comprehensive meaning and way of being that the law seeks to articulate and promote.

A third tension between the letter and the spirit of the law might also occur as discoveries are made in response to moral questions. The new standard of coherence might shift so much that a radical transformation must be undergone to achieve the new moral framework. Here the old expressions of law may ill fit the new way of being and the letter might oppose the spirit if new wine is forced into old skins.

In looking at similarities between Polanyi and Aristotle, we have seen that Polanyi's epistemology puts him in the general framework of a virtue ethics, but we have also seen indications of the importance of deontology for Polanyi: we see the value of duty and commitment in Polanyi's conception of heuristic passion, and we see the categorical nature of a solution in Polanyi's conception of universal intent. We have also seen briefly how intuitions and sentiments play an important role in moral judgments as the joint comprehension and accompaniments of practices and prior judgments.

In the notion of a *way of being* as the goal of morality, we begin to see a synthesis of moral approaches. The way of being that Aristotle describes as happy, and one which also raises the level of happiness throughout humanity, would seem to be the most choiceworthy. Yet the goal of following the moral law is not merely a state, i.e., happiness, or a state of affairs, i.e., a flourishing society. The moral laws are designed to help transform our ordinary way of being into that of the good person. In that respect they are subservient to an end. But if the laws are also contiguous with a way of being, they are not merely means to an end; they are also an expression of the character we seek to attain. Moral law may therefore express the dignity we reserve for people and the truth we accord to reality.

Endnotes

¹This article is the first part of a larger project titled "From Science to Spirituality: A Polanyian Perspective on Moral Law, Virtue For-Itself, and Religious Transformation", which was presented at the Polanyi Society meeting at the APA in Philadelphia, December, 2008. By emphasizing the connections between Polanyi's philosophy and Aristotle's virtue ethics, this first part begins to set the basis for a Polanyian picture of how

morality works and how different ethical systems can fit together. In the second part, by looking at differences between Polanyi and Aristotle, I expand the picture to account for when and why virtue should be practiced for itself and to show how a Polanyian might understand the transformative capability of spiritual enlightenment.

²In “Virtues, Ideals, and the Convivial Community: Further Steps Toward a Polanyian Ethics” (*TAD*, 30:3 [2003-04]: 40-51), Walter Gulick mentions the affinity between Polanyi’s philosophy and Aristotle’s ethics that I will elaborate upon here. He writes, “Polanyi, like virtue ethicists, believes that moral actions arise out of embodied skills and deeply held commitments. He would acknowledge that ethical decision making utilizes a practical reasoning process, consistent with Aristotelian *phronesis*, that wisely applies ideals and values to specific situations. In sum, Polanyi would appreciate how virtue ethics illuminates aspects of the tacit functioning of the moral actor. But it is also the case that Polanyi never devotes attention to the virtues as such” (45).

³In “Creative Imagination,” Polanyi illustrates how explicit instructions can hinder the development of a skill in his discussion of how one learns to use inverted spectacles (259). Polanyi’s 1966 “Creative Imagination,” henceforth “CI,” is reprinted in R.T. Allen, ed., *Society, Economics, and Philosophy: Selected Papers (of) Michael Polanyi*, (London: Transaction Publishers, 1997), 249-265.

⁴Wittgenstein, *Philosophical Investigations*, (Oxford: Basil Blackwell, 1991), #198-199. Mark Discher also sees how the explicit rules are inadequate for Polanyi and are subject to Wittgenstein’s criticisms regarding rule-following. See “Michael Polanyi’s Epistemology of Science and Its Implications for a Problem in Moral Philosophy,” *TAD*, 29:1 (2002-03): 49-59.

⁵*Phronesis* is geared towards knowing what is contingent, i.e., what is not unchangeably true knowledge (*episteme*). All knowledge about nature is based on *phronesis*. This narrows any gap between moral and scientific knowledge for Aristotle as well as for Polanyi. References to Aristotle marked *NE*, refer to *Nicomachean Ethics*, trans. Terence Hawkins (Indianapolis: Hackett Publishing Co., 1999).

⁶Polanyi also recognizes the importance of having the right feelings in science. He writes, “[S]cience, by virtue of its passionate note, finds its place among the great systems of utterances which try to evoke and impose correct modes of feeling. In teaching its own kind of formal excellence science functions like art, religion, morality, law and other constituents of culture” (*PK*, 133).

⁷Also, as Goodenough and Deacon stress in “From Biology to Consciousness to Morality” (*TAD*, 30:3 [2003-04]: 6-21), one must experience pleasure in witnessing, as well as performing, a virtuous act (18-19).

⁸See MacIntyre, *Whose Justice? Which Rationality?* (Notre Dame, Indiana: University of Notre Dame Press, 1988), 118; henceforth, *WJ?WR?*.

⁹For Polanyi see *M*, 30 and *KB*, 105 (on Kant); for Aristotle see MacIntyre, *WJ?WR?*, 116-117.

¹⁰It is also the case that the excellent person can function for us as an ideal we seek to live *through* rather than be any actual person, i.e., a joint comprehension of good practices –partially embodied in particular people— that we attempt look *through* to find the good action to perform in a particular circumstance. The standard we defer to is not a law but this idealized person (*phronomos*) who can take into account all the competing principles and contingencies to make a good decision. What the good person would do also has right and wrong answers that can be intelligently considered, which marks a transition from a description (fact) to something normatively binding (value).

¹¹Others are better at training and analysis than they are at performing skills, e.g., the coach and the critic. The moral master may not know how he does what he does, just as the coach or critic might have a better appreciation of the clues than the athlete or artist.

¹²See *After Virtue*, *WJ?WR?* and *Three Rival Versions of Moral Enquiry*. MacIntyre’s choice for Aristotelian philosophy as the correct moral tradition is in part due to its ability to explain the moral understanding present in other traditions. I would take the same tack in defending a Polanyian moral philosophy.

¹³John Flett in “Alasdair MacIntyre’s Tradition-Constituted Enquiry in Polanyian Perspective” (*TAD*, 26:2 [1999-2000]: 6-20) discusses common themes in MacIntyre and Polanyi, especially the conception of knowing as a skill. He says, “Intellectual passions are also, for Polanyi, tied to apprenticeship in a particular articulate

tradition which must be supported by wider culture that, in turn, supports ideals” (17). Flett notes that MacIntyre downplays the role of passion to promote an internal rationality.

¹⁴Hence ethics, for Aristotle, leads directly into politics, which answers questions about how to make people virtuous.

¹⁵This notion of an *epagoge* as an unveiling of reality, in which practical wisdom opens to the reception of theoretical knowledge, is a way of unifying Aristotle and Plato suggested by Hans-Georg Gadamer (in a course on Aristotle’s *phronesis* conducted at Boston College in the Fall of 1984). MacIntyre makes a similar point in *WJ?WR?* chapter VI.

¹⁶C.S. Peirce’s notion of *abduction* may better describe the “induction” of tacit inference. For more on this possibility see Phil Mullins, “Peirce’s Abduction and Polanyi’s Tacit Knowing,” *The Journal of Speculative Philosophy*, 16:3 (2002): 198-224.

¹⁷Moral passion is essential, as Goodenough and Deacon (2003-2004) show by taking the example of the psychopath, who could do the right thing but would not be acting morally. Some essential tacit coefficients would be absent (17).

¹⁸Unaccountable fear of a particular stranger, for example might be traced to reasons why one should be afraid, e.g., to clues as subtle as the dilation of the eyes upon the mention of a particularly gruesome word. We may not be explicitly aware of the reasons for a fear response, but tacit knowledge of those reasons gets expressed in the feeling.

¹⁹If a feeling persists that *should* change in the light of a judgment, it may be a sign that we have not yet re-educated our habits in the light of the proper judgment, or it may be a sign that the judgment is wrong and the feeling expresses tacit information that was missed, i.e., all the clues that are important for a proper resolution have not been integrated in the judgment’s purported resolution.

²⁰Walter Gulick offers a somewhat different interpretation of how we become aware of subsidiaries in this same issue of *TAD* when he distinguishes analysis from evocation, both occurring within the *from-via-to* structure of symbolic understanding. He sees pattern recognition and integration as basic to the concept formation that may lead from experience to maxims to principles. I explore my *from-through-to* structure in relation to concept formation in Lowney, “The Tacit in Frege” forthcoming in *Polanyiana*, 17:1-2 (2008).

²¹From lecture notes quoted in Scott and Moleski, *Michael Polanyi, Scientist and Philosopher*, (Oxford: Oxford University Press, 2005), 273; see also *M*, 155.

²²Avery Dulles takes a Polanyian approach to religious dogma. He sees that a dogma can be the answer to a consuming question in a religious tradition (see *The Survival of Dogma*, [New York:Crossroads, 1982]; *Models of Revelation*, [Garden City: Doubleday, 1983]). Dogma may act like constitutional law in that it has openness to as yet undiscovered interpretations that will make more sense as our pursuit progresses and moral reality unfolds.

²³As Gulick writes, “Polanyi is sympathetic to the senses of obligation and rightness that are found in deontological theories. Persons are called to attend to the call of conscience and submit to their communally affirmed values and ideals. Rightness, however, is not something imposed by a social authority; rather it is a communally endorsed standard guiding the performance of one seeking to do the good with universal intent. Values like truth, beauty and justice do not exist in some sort of Platonic eternal ideal realm, for they are ‘things which can be apprehended only in serving them’ (*PK* 279). Our obligation to them flows out of our commitment to them, which in turn is based on our assessment of them as real and worthy of respect” (*TAD*, 30:3 [2003-04]: 43).

²⁴This, however, can cut both ways and make Polanyi appear to be an ontological relativist.

In Memoriam: Marjorie Grene

Phil Mullins

ABSTRACT Key Words: Marjorie Grene, philosophy of biology, history of philosophy, Michael Polanyi, Merleau-Ponty, James J. and Eleanor Gibson, ecological psychology.

This memorial essay surveys the achievements of Marjorie Grene as a historian of philosophy and a philosopher of biology. It analyzes the way in which Grene's account of persons and knowledge develops in relation to her work in succession on the thought of Michael Polanyi, Maurice Merleau-Ponty and the ecological psychology of James J. and Eleanor Gibson.

Introduction

Marjorie Grene died on March 16, 2009, at the age of 98, in Blacksburg, VA. To aggregate and paraphrase the several touching but often also humorous comments I found on the web by former students and colleagues, she was regarded as an in-your-face blunt, extraordinarily clever, uncompromising, compassionate and incisive philosopher who was always irreverent before orthodoxies—a memorable and brilliant thinker. Some of the postings comment insightfully on Grene's philosophical commitments and this no doubt is what she would have preferred rather than preoccupation with her persona. Assessment of her contributions to philosophy had already begun in Grene's last years. I won't pretend in this memorial reflection that I can contribute more than a few scattered thoughts assessing Grene's work. I have not read all of the great many things that she wrote in her nearly seventy years of doing philosophy;¹ several that I have read (some more than once), I did not understand. Some that I did understand and regarded as extraordinarily insightful, Grene, to my dismay, later disavowed. She was a thinker who regularly re-evaluated her philosophical commitments and she spoke as directly about what she later took to be her own earlier missteps as those of other thinkers.²

Grene was still energetically doing philosophy up until her mid nineties. Here is a survey of some recent work perhaps familiar to readers of *TAD*, although this is by no means all of her prodigious output late in life. She, of course, was a plenary speaker at the 1991 Kent State Polanyi Conference where her address carefully laid out the meaning of "personal" and "subjective" in *PK*, which she re-read after more than twenty years.³ She both defended Polanyi's careful account against standard misreadings and suggested why Polanyi has been little appreciated by mainstream philosophy.⁴ She also accused Polanyi of inserting a "treacherous footnote" (*PT*, 171) not heretofore noticed in Part IV that indicated he was not completely consistent and in fact undermined his own case.⁵ In 1995, she published *A Philosophical Testament* which she contended was not a conventional autobiographical memoir but a collection of philosophical musings about what had interested her in her long life as a philosopher. These interests cluster around epistemic questions about what it means to be a person. I find this book a very thoughtful, probing inquiry which in many ways builds upon philosophical suppositions found in Polanyi's writing.⁶ In 2002, Grene became the first female philosopher to have a volume in The Library of Living Philosophers dedicated to her work.⁷ *The Philosophy of Marjorie Grene* is a collection of essays treating several elements of her philosophical thinking, along with Grene's insightful and often pointed responses to all 23 essays, and a 25 page "Intellectual Autobiography."⁸ In 2004, with David Depew, she published *The Philosophy of Biology: An Episodic History* (Cambridge University Press). This history of the philosophy of biology is a tome longer than *PK* and equally dense; it begins with Aristotle and moves forward to and through the major

discussions in the contemporary period, discussions involving both scientists and philosophers and in which Grene often has been a major player.

In the following paragraphs, I try to outline the contours of Grene's philosophical achievement and provide some insights into the coherence of her philosophical ideas. I approach these objectives by drawing out and examining some of the historical particulars and themes touched in Grene's 2002 "Intellectual Autobiography" and her responses to essays on her thought in *PMG*, as well as comments she makes in several other publications. I commend Grene's account in *PMG* of her intellectual pilgrimage as a rich piece of self-reflection likely to intrigue anyone and especially anyone even vaguely interested in her years of work with Michael Polanyi. As I have argued elsewhere, I believe Polanyi's high praise for Grene noted prominently in the Acknowledgements of *PK* (xv) as well as in his letters, needs to be recognized as a marker signifying that Polanyi truly regarded Grene as a catalytic peer. Grene was as well a philosophical successor to Polanyi who took what she regarded as the best fruits of their collaboration and continued to devote herself to the service of inquiry.⁹

The Importance of History and the History of Philosophy

Although she contends the particulars of her personal history have no place in an intellectual autobiography, Grene affirms that those particulars did strongly shape her life and work as a philosopher:

As has long been the case with most women, and still holds today for very many, my personal history has had a very important influence on my professional work, keeping me from it in large measure for many years and encouraging me...to work in areas I would not myself have chosen. But the particulars of that history are irrelevant to the present story. It is not my life as a growing girl, wife, mother, farmer's wife, and farmer that belongs in this volume, but only my life in philosophy, patchy though it happens to have been (*PMG*, 3).

Grene takes history seriously and this shows up in several ways. Here she seems primarily to be referring to what she regards as her own rather odd professional teaching career and publication record. She sees this oddness as a reflection of both her gender and her commitments and the prevailing disposition of academic American philosophy at the time she became a professional philosopher. But this affirmation strikes me as not merely an interesting biographical footnote; it can be read also as an affirmation that fits into Grene's larger philosophical realist account of the nature of human personhood. Like Michael Polanyi, Grene more or less subscribes to philosophical notions that Polanyi identified as the "calling" which persons have. As Grene puts it in one place, "we find ourselves as real beings in a real world in which we are trying to find our way" (*PMG*, 362) and this project of finding our way engages persons in trying to understand and make commitments about the world. The "accidents of personal existence" are the "concrete opportunities" (*PK*, 322) in which achievements emerge and personal responsibility is exercised.

After taking an undergraduate degree in zoology at Wellesley in 1931, Grene went to Germany to study with Heidegger, Jaspers and others for a couple of years. She did not much like the ideas of Heidegger or Jaspers, although she suggests that she learned a great deal from their historically-oriented courses on Plato, Kant and Hegel (*PMG*, 6, 256). In her study, she notes that she reconfirmed a conclusion she had come to even as an undergraduate, namely that it simply made no sense to her to "accept the *cogito*, and all it implies, as the unique starting point of philosophy..." (*PMG*, 4). Grene rightly indicates that this refusal is a theme that runs through her philosophizing from early to late. She is a thinker who insists that humans are bio-social creatures and we

must begin not with the *cogito* but with the embodied person, an environmentally-grounded, alert respondent in contact with social companions. We are shaped by and the shapers of the communities in which we participate:

To be alive, however, is to be somewhere, responding somehow to an environment, and in turn shaping that environment by our way of coping with it. To study human practices, including language, as forms of life is to study them as activities of the particular sort of animal we find ourselves to be (*PT*, 63-64).¹⁰

Her early study in Germany with thinkers who are anti-Cartesian¹¹ does seem to have influenced her at least insofar as she comes upon the notion in Heidegger (and later in Sartre) that a person is constituted as a being-in-a-world.¹² However her publications and comments make clear that Heidegger as well as Sartre and Kierkegaard are, she believes, largely misguided thinkers. After completing her Ph. D. at Radcliff (1935) with a dissertation on *Existenzphilosophie* that she describes as “hasty and atrocious” (*PMG*, 7), she found that she could not land a philosophy job so she sought a grant to go to Denmark to study Kierkegaard, that “gloomy Dane” (*PT*, 5) about whom she later wrote an unpublished, and now lost, book (*PMG*, 8).¹³ Although Grene does not seem to have high regard for either her graduate or early post-graduate projects, she does note that she found “inspiration” (*PMG*, 7) in three graduate school teachers with whom she worked, David Prall, Alfred North Whitehead, and C. I. Lewis. Again it is primarily work with her teachers on figures in the history of philosophy that she thinks was important, although she says that work with Lewis also launched her dissertation and her interest in the emerging new logical positivist movement which brought her to the University of Chicago in 1937 to work as a teaching assistant in order to participate in Carnap’s seminar.

She was not long infatuated with positivism, although she did not really believe she had grasped its weaknesses until she began working with Polanyi (whom she did think had fathomed that weakness) after she met him when he lectured at the University of Chicago in the spring term of 1950. Her seven years at the University of Chicago in an official teaching role had earlier come to an end in 1944, when, as she bluntly puts matters without elaborating, “MacKeon had me fired” (*PT*, 5). By 1950, she had become a farmer and mother and henceforth essentially operated outside academic university-based philosophy, although she did do some scattered publishing. After their serendipitous meeting in Chicago, Polanyi hired Grene, probably first in 1950 or 1951 (with soft money), to work with him on his upcoming Gifford Lectures and thereafter off and on for six years to work on converting the Gifford Lectures to *PK*. Grene, in 1952, moved to Ireland and a farming life there outside the university, although she did work diligently with Polanyi until the 1958 publication of *PK*.

In 1960, Grene was appointed to teach Greek philosophy in Belfast. This was the first of several short-term appointments until she returned to the University of California, Davis, in 1965 where she taught for 13 years; after she retired from Davis, she took many short term appointments, eventually teaching at more than 20 universities. Grene identifies her return to teaching in Belfast as a pivotal time for her because it led her to a more careful study of Aristotle and to dig more deeply into questions in the philosophy of biology. This was a time that launched her post-*PK* professional life in two directions, history of philosophy and philosophy of biology.¹⁴ She interpreted Aristotle “as a metaphysician motivated by his researches in biology” [*PMG*, 15] but what she learned in her contextual study of Aristotle she used to gain perspective on modern biology and contribute to contemporary discussions in philosophy of biology.¹⁵ In fact, one of Grene’s early historically-oriented books is *The Knower and the Known*, published not long after *A Portrait of Aristotle* (University of Chicago Press, 1963). This 1966 book,¹⁶ as I have noted above, she later heavily criticizes, but originally she intended it to be, as one letter to Polanyi puts it, a book focusing on “historical studies in the light of PK.”¹⁷ *KK* is dedicated to

Michael Polanyi.

In sum, Grene has been an important recent contributor to the history of philosophy. She is a figure who emphasizes that careful, detailed study of figures in historical context can provide insight about how such materials bear on contemporary philosophical discussions. In *PMG*, she calls this a “bi-contextual point of reference” and she provides this rationale for such an approach: “. . . since we are histories, and Western philosophy is a history, locating our own concerns judiciously within that history illuminates and enriches our own beliefs and our own arguments” (*PMG*, 10). Or as she more succinctly and much more personally summarizes the significance of her investigations in the history of philosophy, “my sorties into a number of areas in the history of philosophy have helped me toward not so much a set of conclusions, as of premises” (*PMG*, 26). Interestingly, Grene’s sensitivity to history in the case of philosophical figures parallels the sensitivity Polanyi often showed in works like *PK* for considering scientists and scientific discoveries in historical scientific context. However, Grene identifies one of her differences with Polanyi as turning on her serious appreciation for the history of philosophy:

But I have also [over the course of her career] developed interests that were, so to speak, decidedly extra-Polanyian. Once I returned to teaching, I found myself fascinated by various figures, and periods, in the history of philosophy, subjects that held little interest for Polanyi. When I was working with him (Polanyi), I did indeed try to assist him with historical information when it was needed; but he thought of history from a scientist’s point of view—as a source from which to cull tidbits, but no more (*PMG*, 61).

Philosophy of Biology

Certainly Grene will be remembered as one of the founding figures in philosophy of biology as we presently know it. Her book with David Depew, *The Philosophy of Biology: An Episodic History*, is a magisterial account. Grene worked on a number of different issues within philosophy of biology. Conceptual problems in evolutionary theory were a continuing major interest. From the period just after the publication of *PK* in the early sixties when she was still interacting with Polanyi as his late ideas developed, Grene tried to introduce a variety of European scientists whose writing was philosophical and focused on biology and anthropology. Her correspondence with Polanyi in this period provides a lively running commentary on some of these figures that she was reading and thought Polanyi should study. This body of work, she says, “gave me a broader perspective on philosophical questions connected with biology” (*PMG*, 18) and she in 1969 published a book treating several of these figures (*Approaches to a Philosophical Biology*) which by 2002 she said she “should have left unwritten” (*PMG*, 18). Grene’s interest in European philosophical scientists seems to have stirred neither American scientists nor philosophers interested in philosophy of biology, but she likely underrates the importance of this material in her later life when she calls it “my excursion into the work of more peripheral thinkers” (*PMG*, 19). Grene notes that much of her early work in philosophy of biology was devoted to two problems, “reductionism (is biology reducible to chemistry and physics?) and the question of hierarchies in biology” (*PMG*, 19). She suggests that her work in philosophy of biology drew her into broader questions about philosophy of science.¹⁸ But it is certainly also true that her even earlier work with Polanyi in philosophy of science sets her up to be unhappy with much she finds in philosophy of science—even before she did significant work in philosophy of biology. John Compton, many years ago did an analysis of Grene’s contribution to philosophy of science, which I believe is still a very insightful account.¹⁹ He shows how Grene has worked to reconceive the cognitive claims of science and the problems of realism on the basis of what he calls “recent historical and process-

oriented analysis of inquiry” (354), by which he means Grene’s appropriation of anti-Cartesian late modern thinkers, such as Polanyi, Merleau-Ponty and the Gibsons, as I suggest below. Compton says Grene’s thought is grounded in “an ontology which takes life seriously;” that is, she provides “this evocation of life at the center of being and knowing” (356) which is her “most distinctive contribution to philosophy of science” (357). This also, of course, animates her thinking about issues like reducibility and hierarchy in philosophy of biology since one cannot affirm the “‘primacy of life’ thesis” (359) with a one-level ontology, as her early work with Polanyi surely made clear to her.

Grene’s *PT* and her “Intellectual Autobiography” in *PMG* unequivocally affirm that Grene’s philosophical interests and contributions extend well beyond the sub-specialty of philosophy of biology and beyond philosophy of science per se. Several of the issues she pursues in these areas do seem to have grown out of her early work with Polanyi in philosophy of science and particularly her early study of the modern synthesis that began with Polanyi in the fifties.²⁰ I find that most of the philosophy of biology issues that later interested Grene are issues that fit with her larger pattern of interests in problems of knowledge and personhood. Despite her claim that her “life in philosophy” has been “patchy” (*PMG*, 4), it seems to me relatively coherent. She insightfully notes, about her work in not only philosophy of biology but also her work in history of philosophy, “. . . somehow the problem of the person has been haunting me through all these wanderings. . .” (*PT*, 174). Indeed, I think one might see Grene’s push to clarify certain philosophical matters in contemporary biology as part of an effort to take seriously the challenge found in the final section of *PK* whereby biology must ultimately explain how we have come to have the modern committed biologist (or philosopher of biology) at work on the interesting problems of biology.²¹

Grene’s Intellectual Mentors

Yet I find, looking back, that it is successively Polanyi, Merleau-Ponty, and Gibson who mark the significant stages on my (intellectual) life’s way (*PMG*, 81).

This succinct comment by Grene identifies the primary intellectual resources that Grene acknowledges that she has drawn on and put together as she has articulated her philosophical perspective.²² Very briefly, I comment below on what she seems to have found in each of these figures.

Grene worked closely with Polanyi in some periods of the 26 years from 1950 when she met Polanyi until Polanyi’s death in 1976. The first eight years were focused on the Gifford Lectures and the long project of hammering out *PK*, which differs substantially from the Gifford Lectures. Later years were a less intense sort of collaboration, since Grene then had numerous academic responsibilities and a growing professional career as a historian of philosophy and a philosopher of biology. Nevertheless, the Grene-Polanyi letters suggest that Grene was often deeply involved in some later Polanyi projects such as the Study Group on the Unity of Knowledge. She also carefully scrutinized and criticized drafts of many Polanyi lectures and papers that eventually became late Polanyi articles and books. Although she never says so, she was more than merely a passive observer watching as Polanyi refined his ideas in *PK* about “two kinds of awareness” to produce the philosophically richer theory of tacit knowing found in late publications. The correspondence shows that it certainly understates matters to identify Grene simply as a humble editor of *KB* and a polite commentator on the multiple drafts of material that became *TD*!

What does Grene carry forward from her work with Polanyi?²³ She shares Polanyi’s criticism for what

Polanyi generically called “objectivism” and what he terms “the critical tradition.” Although I don’t think she believes Polanyi nails down very carefully the details of the recent history of ideas (or the history of philosophy), she seems to think his critical philosophizing is more or less on target and some of her studies in the history of philosophy give detail and nuance to this account. Of course, she likes Polanyi’s constructive philosophy (his alternative to “the critical tradition”) even better than his critical philosophy. She accepts what both she and Polanyi early term the “fiduciary program” which she in *PMG* defines as “a kind of lay Augustinianism, in which we recognize that our reasoning always rests on the attempt to clarify, and to improve, something we already believe, but believe, of course, in such a way that we recognize that we might be mistaken” (13-14). Grene calls herself a “dogmatic fallibilist” (*PT*, 3). Like Polanyi, she is a realist but, as some of the quotations used above suggest, she does not intend for her realism to be understood as that term has come to be used in contemporary philosophy of science debates.²⁴ Perhaps even more than Polanyi, Grene emphasizes the precariousness of knowledge and the necessity of commitment.²⁵ Later in life, she used more traditional philosophical language to formulate some of these elements of her epistemic perspective: “knowledge is justified belief, which we have good reason to believe, but can never ‘know’ for sure, is true” (*PT*, 25). Grene, of course, very much likes Polanyi’s account of science emphasizing the continuity between (1) ordinary perception and problem solving and (2) the specialized investigations and discovery in science. She likes the fact that Polanyi took seriously the history of science and the practices of scientists. She eventually uses the framework of ecological psychology and some of the language of Merleau-Ponty to articulate her ideas about the life-world of science, but she first works out these views in working with Polanyi. Science is a special and fascinating world (or community of inquiry) in which one may dwell to learn its practices, ideals, problems and vision of things, but it is a human world, like the many other culturally specific human worlds in which one can become a responsible person; all such worlds are nested within the natural world.²⁶ The element of Polanyi’s thought that Grene most frequently references is the theory of tacit knowing. She claimed in 1977 that Polanyi’s best formulations of the theory of tacit knowing “should be the conceptual instrument for a one hundred and eighty degree reversal in the approach of philosophers to the problems of epistemology” (“TKG,” 168). She holds that the claim that knowledge “always entails a from-to structure” (*PMG*, 14) is a fundamental commitment about the importance of the unspecifiable, a commitment on which one can build not only a sensible vision of science but a sensible account of the way persons live, using their powers to indwell as they seek orientation in the world:

This was a good platform, I think, on which to build a vision of science, of knowledge, and of human reality against and beyond the divided *res cogitans* and *res extensa* bequeathed to us by Descartes. Indeed, it was in the introduction to *Knowing and Being* (1969), a collection of Polanyi’s essays which I edited, that I first formulated the slogan “All knowledge is orientation” (*PMG*, 14).

Grene discovers Merleau-Ponty in 1960, only two years after *PK* is published at the time her work in the history of philosophy and philosophy of biology was beginning.²⁷ Although Grene always appreciated Polanyi’s ideas about embodiment which are central to the theory of tacit knowing, she eventually came to think Polanyi had not thoroughly explored embodiment at the primordial level of perception. To put it in language she uses in *PT*, Polanyi had shown there is “no sharp cut between belief and knowledge” but she found Polanyi’s work less effective in showing there is “no sharp cut between perception and belief” (*PT*, 25).²⁸ Grene contends that the connection between perception and thought must be robustly represented.²⁹ She found a richer account of perception and embodiment in Merleau-Ponty, although Grene is quite clear that Polanyi’s tacit knowing and Merleau-Ponty should be linked:

Perception is both primordial—the most primitive kind of knowledge—and pervasive: the milieu, on our side, within which we develop such information as we can obtain, such beliefs as we can articulate, concerning the places, things and processes among which we live, move and have our being. That is, I think, something like what Merleau-Ponty meant by the “primacy of perception”. It is also the necessary foundation of Polanyi’s doctrine of tacit knowing (*PT*, 25).

In *PMG*, Grene suggests Merleau-Ponty “seemed to me to be saying, in a different order, what Polanyi was saying independently, in *Personal Knowledge* (20).

Another way that Grene identifies what special she found in Merleau-Ponty concerns Merleau-Ponty’s appropriation of ideas in Continental philosophy, especially notions about “being-in-the-world.” She contends that Merleau-Ponty “took what was right in it [i.e., being-in-the-world] and placed it in a more appropriate context” (*PT*, 69).³⁰ He provides “the most effective account so far of what it is to be in a world: to be a person living his (her) life in the odd fashion vouchsafed us by the contingencies of global, biological and human history” (*PT*, 80). Merleau-Ponty’s account distinguishes the “physical, the vital, and the human order,” showing how these “spheres of reality” operate successively in boundaries left open by the next lower order of existence (*PT*, 80). Merleau-Ponty, more than Polanyi, establishes Grene’s persistent “counter-Cartesian *leitmotif*” (*PMG*, 21) in terms of his insistence on locating bodiliness in the world:

Merleau-Ponty’s “centrifugal pluralism,” . . . his reliance on the situation of the painter, who “brings his body with him,” as the appropriate model for the way in which we are all bodily with, yet still over against, things in the world, in such a way that we make a world as it makes us (*PMG*, 21).

Grene regards Merleau-Ponty as a figure who was “developing a new, or renewed ontology” and thus was providing “a metaphysical, as distinct from a purely epistemological, refutation of phenomenalism.”³¹ This ontology she identifies as profoundly realistic and aimed against prevailing psychological views of “the causal theory of perception . . . which would exile significance from any ontological status” (606). She argues that Merleau-Ponty rejects the reigning “nominalistic thesis that only particulars are real” (606). His “refutation of phenomenalism and of nominalism” affirms an “ontological pluralism.” That is, Grene affirms that he saw that “a one-level ontology is inadequate and incoherent,” and recognized “that there are hierarchically organized systems, entities, or processes, that can be studied on more than one level because that is how they *are*” (607).³²

In sum, what Grene found in Merleau-Ponty she describes as a new “voice” (*PMG*, 20). She suggests that she worked too closely with Polanyi “and I suppose too much in isolation from any philosophical community” (*PMG*, 20). Merleau-Ponty was something of a way back into philosophy since he spoke an “existentialist discourse” (*PMG*, 20) that she had started from in her early studies in Germany. Most important, Merleau-Ponty bound notions of person tightly to living nature.

Merleau-Ponty’s thesis of the primacy of perception, of his reflection on human perception in particular, gave me a starting point, not made explicit in Polanyi’s account of from-to knowing, for a radically post-cartesian conception of persons as part of living nature, but with a difference. In short, in reading Merleau-Ponty, I found myself, as Kierkegaard would have put it, “his reader” (*PMG*, 20).³³

Finally, it is the ecological psychology of J.J. and Eleanor Gibson³⁴ that Grene adds to Polanyi and Merleau-Ponty to produce the peculiarly insightful mix of anti-Cartesian ideas informing her philosophical stance. She spends a chapter in *PT* (129-151) specifying what she thinks is philosophically important about ecological psychology and also makes interesting comments on it in her “Intellectual Autobiography” (*PMG*, 21-26), as well as in an essay explaining “the primacy of the ecological self.”³⁵ Despite her appreciation of Merleau-Ponty’s emphasis upon the “primacy of perception” and embodiment, Grene eventually came to believe all of this “cries out for a foundation in a theory of perception” (*PMG*, 26) which the Gibsons have more recently provided.³⁶

What she finds in the ecological view of perception is an alternative to the theory of perception that sharply distinguishes sensation and perception, that is, the theory of perception that underlies almost all modern philosophy and which cuts off living persons from the dynamic environment in which they live: we “find ourselves cut off from any direct, reality-based contact with that alien otherness. . . and it must be we who read ‘meanings’ or ‘values’ into that desert-like stuff out there” (*PMG*, 22). Grene contends that psychology as well as philosophy took the path of reifying the distinction between “meaningless sensations, carrying little or no information about the world, and full-bodied perceptions, based on association and judgment” (*PT*, 132). Ecological psychology reverses all of this and takes a serious realist turn, since it studies animals in their habitats and argues “what is primary is not inner bits of sensation, but the grasp by an animal, through its perceptual systems of what matters to it in its environment” (*PT*, 136).³⁷ Using the language of the Gibsons, there are “invariants” (i.e., “constancies in the flow of stimulation”) which permit the animal in its environment to pick up (i.e., use its perceptual systems to recognize) “affordances of the environment: opportunities offered it” (*PMG*, 24). In the human case, perceptions are saturated with cultural ingredients but culture is situated within nature and, as in the case of non-human animals, “in all our enterprises the threefold structure of events or entities, information and affordances persists” (*PMG*, 24).³⁸

Grene argues that the philosophical importance of an ecological account of perception is far reaching because it reframes deeply embedded, common notions about persons, knowledge of the world and self-knowledge. She contends that “the ecological approach to perception puts the natural foundation of our search for knowledge in a new and much more promising light” (*PT*, 171). As I implied above, she thinks the problem of how sensation becomes perception simply dissolves and it becomes clear that there is usually not a hard and fast line between perception and conception if you accept an ecological account: “Meaning is not something superadded to the environment by human linguistic or other conventions. . .” (*PT*, 143) but the world (or environment) of animals, including human animals, is full of meanings by virtue of the direct apprehension of affordances: “. . . all seeing is seeing-as. . . perception is always the engagement of an active exploring organism with the affordances of things and events that are happening, within reach of its perceptual systems, in its real ongoing world” (*PT*, 143). What this entails is a thorough re-conception of notions about self and world and how they are bound up together. One must recognize that “to perceive oneself is, except in very peculiar circumstances, to coperceive the world:” that is, “. . . to be aware of ourselves. . . is to be aware not only of a product of that world but also of aspects of the world that bear on its production” (“PES,” 112). Grene uses the Gibsons to deny categorically modern thought’s “supposition that we have some hidden subjective awareness, or self-awareness, set against a spread-out, meaningless external world” (*PMG*, 25). The notion of a person that emerges from an ecological perspective is one that at last is no longer “haunted by the specter of ‘consciousness’” (*PMG*, 25).³⁹ Rather than inward consciousness, Grene tends to focus on the responsibility that persons can assume as figures who belong to particular human communities: “What I want to stress even in the individual is not anything inward, but something like an ordering principle, a center of responsibility to principles, ends, or causes,

something beyond myself to which I owe allegiance” (*PT*, 178). An ecological approach, Grene thinks, can provide a “solid basis, both epistemological and ontological” (*PMG*, 24) with which to understand human practices, including those of science, embedded in human communities:

The seeker within any human tradition . . . learns to pick up information that enables him or her to ‘perceive’ the affordances of that environment. There is no simple formula for such efforts and achievements . . . but they can be best understood as extension of, or analogues to, the dimensions of perceptual exploration and perceptual learning that we share with distant cousins . . . (*PMG*, 25).

In sum, anyone who wants to understand the final formulations of her philosophical perspective must take Marjorie Grene quite straightforwardly when she says “I think that the Gibsons’ work . . . can contribute to a more adequate conception of the way we cope with the world around us through the perceptual systems conferred on us by our evolutionary history” (*PT*, 130-131).

In some ways, of course, the ecological account supersedes ideas Grene drew from Polanyi and Merleau-Ponty, but in other ways Grene meshes the views of all her mentors. She notes that her “earlier guiding lights, Polanyi, Merleau-Ponty and Plessner, have contributed” to views “anticipating some aspects of Gibson’s ecological realism” (*PMG*, 25). About Polanyi, she says “Gibsonian perception is also tacit knowing; there is certainly a kinship between the two views” (*PMG*, 61). About Merleau-Ponty, she says, “. . . I found in Gibson a striking convergence with Merleau’s views” (*PT*, 130).

Marjorie Grene frequently tended to downplay her own originality as a thinker: “Not that I invented my concept of the person; I am far from claiming to be an original thinker. But most of those who have influenced my thinking on this matter, or have helped me to formulate my views are dead: Michael Polanyi, Helmuth Plessner, Maurice Merleau-Ponty—writers unread, in any case by contemporary analytic philosophers” (*PMG*, 195). Like John Compton, I think Marjorie Grene had an extraordinary gift for putting things together.⁴⁰ Surely this is a kind of originality that has yielded important philosophical achievements. Many will sorely miss the vigor, wit and creativity with which she long engaged in philosophical reflection, which she characterizes at the end of her “Intellectual Autobiography” very humbly: “I have been, it seems as Polanyi thought one should do, trying to clarify, and improve my fundamental beliefs” (*PMG*, 26).

Endnotes

¹As I note below, Grene was honored in a Library of Living Philosophers volume (29, edited by Randall E. Auxier and Lewis Edwin Hahn, *The Philosophy of Marjorie Grene* [Chicago: Open Court Publishing, 2002]) seven years before her death. This volume, noted hereafter as *PMG*, was actually her third festschrift. Those interested in a full list of Grene’s publications should consult the bibliography included at the end of *PMG* (569-579).

²Particularly in comments in late publications such *A Philosophical Testament* (Chicago: Open Court Publishing, 1995 [hereafter *PT*]) and in her *PMG* “Intellectual Autobiography” (3-28) and responses to essays (see, for example, 378, 510, 547), Grene makes clear her sharp criticisms of her own earlier work. In response to a 2001 e-mail noting that I very much liked *The Knower and the Known* (Berkeley: University of CA Press, 1966, [KK]) and *PT*, Grene wrote the following: “By now I’m also very suspicious of much in the Knower and the Known (sic)—especially the Darwinism chapter, which is awful, and the teleology chapter, which is mistaken” (12 March

2001, Grene to Mullins e-mail). In a reply to Helen E. Longino's essay in *PMG* on Grene's naturalism, she says "First about Plato and Aristotle, *The Knower and the Known* was a deeply flawed book. I hadn't thought the first few chapters too bad, but what Longino quotes me as saying about Aristotle is downright silly" (99). In her reply to David Hull's *PMG* essay, Grene wryly commented, "as his account makes clear, I write too much too hastily: a remark that can probably be applied to what I am writing at this moment" (279). Especially some of Grene's views on evolution have changed as she grew older. In *PMG*, she made very clear that she did not wish to be dogged with things she wrote earlier: "But the greater richness of current evolutionary theory does, I'm afraid, make me ashamed of some of my pronouncements, not indeed, in my callow youth, but in my naïve middle age. It is not only the first year of life in which we assimilate our culture: one does or can, keep revising one's beliefs. In this case, what I believed thirty years ago I want in part very emphatically to reject!" (81).

³Marjorie Grene, "The Personal and the Subjective," *TAD* 22:3 (1995-96): 6-16 which is hereafter noted as "P and S."

⁴See not only "P and S" for comments on ways Polanyi is misread, but also Marjorie Grene, "Tacit Knowing: Grounds for a Revolution in Philosophy," *Journal of the British Society for Phenomenology* 8, no. 3 (October 1977): 164-171. This short article, noted hereafter as "TKG," written just after Polanyi's death provides an account of Polanyi's philosophical development from roughly the mid-forties just before he meets Grene (1950) until the late sixties when *Knowing and Being: Essays by Michael Polanyi* (ed. Marjorie Grene [Chicago: University of Chicago Press, 1969]) is published (*KB* hereafter). Grene's criticisms of Polanyi are found here ("TKG") and in other publications ("P and S," *PT* and *PMG*) but also in her correspondence with Polanyi, most of which covers the period after the publication of *PK*. The archival Polanyi-Grene correspondence is in the Papers of Michael Polanyi in the Regenstein Library of the University of Chicago, Box 16, Folders 1-15. Citations of archival material below are simply by box and folder. In general, my view is that Grene does a superb job in "TKG" and her other scattered comments of analyzing the development of Polanyi's philosophical ideas from the mid forties through the late sixties. She shows how the problems of the administration of science are succeeded by deeper epistemological problems which are addressed by analyzing scientific discovery and ordinary perception, showing the foundational nature of belief. She traces the course of Polanyi's deepening understanding of "two kinds of awareness," eventually producing his mature theory of tacit knowing. She sees parallels between Polanyi's ideas and those of other thinkers, some contemporary. However, Grene undervalues some of Polanyi's writing from the late thirties and early forties on liberal society; she may not know this writing or she may simply think of this early writing as no more than early evidence of Polanyi's opposition to "planned" science. I believe, however, there is more here, namely an interesting and unique formulation of classical liberal social philosophy. Grene also does not seem to recognize how some early Gestalt-influenced notions about "two kinds of order" prepare the way for later discussions of "two kinds of awareness." Finally, Grene does not see much of value in Polanyi's late effort at a grand synthesis focused on meaning which is published in *Meaning*, his book with Harry Prosch. She does offer, in both letters and print, some interesting and pointed criticisms of ideas in this late material which begins to take shape in lectures of the late sixties.

⁵I discuss Grene's account of the footnote in my essay in *PMG* (44-45).

⁶I wrote a *TAD* review essay on *PT* that noted its several themes (*TAD* 27:1 [2000-2001]: 33-45). Much to my surprise, Grene sent me an e-mail indicating she liked the review (28 Nov. 2000, Grene to Mullins e-mail).

⁷*PMG* was reviewed by Robert Doede in *TAD* 31:1 (2004-2005): 46-48.

⁸At the end of *PMG* (566), Grene points out that not all of what she regards as her significant contributions in the history of philosophy were treated in the volume. While her work on Descartes, Heidegger and Sartre was considered in essays, there is nothing in the volume on her work on Aristotle or Merleau-Ponty, two figures very important for her development. Grene notes that she therefore says quite a bit about her work on these figures in her "Intellectual Autobiography." As her list of publications shows, Grene actually has written

about a large number of figures (especially if you count figures like Polanyi, Plessner, etc.) that she does not mention.

⁹This is the view (i.e., catalytic peer and philosophical successor) that I argue for in “On Persons and Knowledge: Marjorie Grene and Michael Polanyi” (*PMG*, 31-60). As the *PK* Acknowledgments make plain, Polanyi recognized that Grene was really a backstage force important in the task of bringing *PK* together. Elizabeth Sewall, another reader of *PK* drafts, also recognized Grene’s contributions. See her comments in “Memoir of Michael Polanyi,” p. 16 (Box 46, Folder 12). Interestingly, Grene was also a figure who collaborated with J. H. Oldham (a third reader of drafts) when *PK* was in press to try to see that the soon to be published *PK* would be reviewed in important journals. See the letters (J. H. Oldham Archive, 10.4, University of Edinburgh Library) exchanged between Grene and Oldham in May and early June of 1958 (*PK* was published June 20, 1958). Grene herself responded to what she took to be an early, somewhat befuddled *Encounter* review of *PK* (vol. 11, no. 3 [1958]: 77-80) by Michael Oakeshott. See Grene’s letter in the very next issue of *Encounter* (“Personal Knowledge,” *Encounter* vol. 11, no. 4 [1958]: 67-68) where she very succinctly laid out the argument of *PK* and tried to get Oakeshott on track. Some of these matters I treat in my unpublished paper “Marjorie Grene and *Personal Knowledge*” given at the 2008 Loyola Polanyi conference.

¹⁰In a response to Anthony Perovich’s essay in *PMG*, she says “I am trying to take a new path, . . . a path that avoids what Plessner called ‘the Cartesian alternative,’ . . . setting off from a different starting point, one which takes seriously our *location*, not just geographically, of course, but within a tradition, or a cluster of traditions, in which we find ourselves and which we may in turn to some extent modify by the way we interiorize or, to some extent, reject, its ways of symboling. Merleau-Ponty’s version of being-in-the-world, Plessner’s account of the differences in positionality between plants, animals, and human persons, or Polanyi’s concept of indwelling can all be useful, it seems to me, in helping to develop such a view” (*PMG*, 195).

¹¹Some of Grene’s early scholarly writing grew out of her study in Europe. When Charles M. Sherover, takes her to task for her earliest books on the existentialists and Heidegger, she repents but only slightly, allowing that she was somewhat sloppy as well as angry and frustrated with Heidegger from when she listened to him in 1933 (*PMG*, 550). She admits her voice might have been less shrill if she had not been exiled from teaching and significant contact with an intellectual community. There is little in *Being and Time* that she likes and Heidegger’s word play she pronounces “a con game to which I long ago developed an immunity” (*PMG*, 547). A more careful but still pointedly critical late discussion of Heidegger, as she notes, is in *PT*, 70-79. See her comments on Sartre in *PT*, 79 and *PMG*, 565-566.

¹²One has to be careful with this point concerning the influence of Continental ideas about “being-in-the-world” on Grene or, for that matter, Polanyi. In *PT*, she says the “exposition” in both Heidegger and Sartre is “defective” (60). Grene commented to Philip Sloan, “What interested me in Polanyi’s work was his reflection on scientific discovery and scientific knowledge. Heidegger’s *Dasein* has little to do with knowledge of any kind. And Polanyi’s concept of indwelling was a late comer in his thought, conceived in a context far removed from Heideggerian ‘being-in-the-world’” (*PMG*, 257). She goes on to note that she thought Polanyi was “wholly innocent of any knowledge of our philosophical tradition, whether past or recent” but was a physical chemist whose philosophizing aimed to clarify “what he called the unspecifiable component of scientific practice” (*PMG*, 257). She says “as for phenomenology—I’m sure Polanyi never read a word of Husserl!” (*PMG*, 257). Grene acknowledges that in 1960 when she read Merleau-Ponty “like some other readers, I found a kind of parallel between the two works [i.e., *PK* and *The Phenomenology of Perception*]. But that was a parallel, not an influence, and one that Polanyi resented and rejected” (*PMG*, 257). Grene here does shed interesting light on the development of Polanyi’s philosophical ideas but her comments somewhat overstate matters perhaps because she has simply forgotten many details of her work with Polanyi. As I note below, Grene is very influenced by Merleau-Ponty when she discovers him in 1960 and she works hard to put Polanyi and Merleau-Ponty together

in the sixties. There are prefatory statements and sometimes short discussions by Polanyi in his books and articles in the sixties that suggest some parallels with modern Continental thinkers; these may in some cases have been added at Grene's insistence. Because Grene was excited about Merleau-Ponty and often mentioned him to Polanyi in letters, Polanyi did read Merleau-Ponty and criticized him. The Grene-Polanyi letters suggest Polanyi actually was reading a wide range of material, often recommended by Grene, throughout the sixties. In one letter, (15 July 1962, Polanyi to Grene, Box 16, Folder 1), Polanyi says "I have always felt uneasy about the way my work is related to phenomenology, so I bought a copy of Cartesian Meditations by Husserl." The letter then quotes from Husserl many times as Polanyi tries to make certain points. Polanyi at times argued with Grene about philosophy in his letters; sometimes he analyzed drafts of Grene articles and commented just as bluntly as Grene commented on his writing.

¹³Grene acknowledges that very early she found Tillich's "thin theism" attractive and "Kierkegaard's breast-beating supersubjectivity, much less so, to put it mildly" (*PMG*, 547).

¹⁴Grene says these are the "two spheres of interest that have kept my attention more or less continuously since 1960" (*PMG*, 20). As I suggest below, she regards the history of philosophy as an interest that she developed that was "decidedly extra-Polanyian" (*PMG*, 61).

¹⁵See her discussion in *PMG* of her historical work on Aristotle and how it contributed to her forays in philosophy of biology (14-16).

¹⁶*KK* was published in 1966 but she says in the "Preface to the Paper-bound Edition of 1974" that it was mostly written from 1961-1963 (but see note 17 below) so it apparently immediately follows her book on Aristotle. Grene's letter to Polanyi of January 19, 1963 (Box 16, Folder 1) notes that the Aristotle book is due out in March. *KK* is a demonstration of Grene's developing interest in both history of philosophy and philosophy of biology. In addition to chapters on important figures in the history of philosophy, *KK* has a chapter "The Faith of Darwinism," which by 2002 Grene regarded as misguided (*PMG*, 16-17). Even in her "Preface to the Paper-bound Edition of 1974," Grene qualifies some of the things she originally wrote in the book.

¹⁷This was Grene's description in her long letter to Polanyi (see p. 3) dated January 19, 1963 (Box 16, Folder 1) where she also includes an outline for the book. She indicates she has been trying to start the book since the previous May and now has a rough introduction. She also suggests that Polanyi urged her to put together a book along the historical lines that she sets forth in the outline. In *PMG*, Grene says about *KK* that it was a book "intended to show some guidelines in the history of philosophy that might help lead to a philosophy like Polanyi's..." (25).

¹⁸The final chapter of Grene and Depew's 2004 *The Philosophy of Biology: An Episodic History* (348-361) argues that philosophy of science, long caught between the residue of logical positivist views and social constructionist views, should be reshaped by the best of the recent tradition in philosophy of biology. Although there is but one reference here to Polanyi, the tracks of the *Personal Knowledge* project and Grene's work with Polanyi thereafter can be clearly seen. This final chapter much resembles the argument in Grene's 1985 article, "Perception, Interpretation, and the Sciences: Toward a New Philosophy of Science" in *Evolution at a Crossroads: The New Biology and the New Philosophy of Science*, ed. David J. Depew and Bruce H. Weber (Cambridge: MIT Press): 1-20.

¹⁹"Marjorie Grene and the Phenomenon of Life," *Proceedings of the Biennial Meeting of the Philosophy of Science Association*, Vol. 1984, Vol. 2: Symposia and Invited Papers (1984), 354-364; at one point also available at <http://www.culturaleconomics.atfreeweb.com/Anno/Compton%20Marjorie%20Grene%20and%20the%20Phenomenon%20of%20Life%20%20PSA%201984.htm>

²⁰She notes in *PT* that one of her first tasks in working with Polanyi was to find for Polanyi in the literature of biology "heresies in evolutionary theory, specifically critics of the evolutionary synthesis" (91).

²¹Grene might not like my suggestion here linking her work in philosophy of biology with the argument

in Part IV of *PK*. Although she was an eloquent early defender of this section of *PK*, Grene became more and more critical of Part IV. Here is her comment in 2002: "...when I looked more carefully than I had at the time into the literature of evolutionary biology, I found Polanyi's argument (of Part IV of *Personal Knowledge*) even more shocking than I had originally thought it; so that interest, too, took me away from his work" (*PMG*, 61). On the other hand, Grene continued to appreciate what Polanyi said in Part IV about "*ultrabiology*" (*PK*, 387). In *PT*, Grene says, "epistemology is a branch of ethology. In the same spirit, Polanyi called the problem of knowledge *ultrabiology*..." (47). In *PMG*, she says, "despite my misgivings about Polanyi's treatment of evolutionary theory, I still appreciate his dubbing epistemology, or philosophy of science, 'ultrabiology.' When we reflect on the nature of epistemic claims, we are indeed studying the behavior of some peculiar animals, in this case, a subset of our own kind" (61-62).

²²Grene frequently also mentions Helmut Plessner as an instructive figure but in *PMG* she says of Plessner, "Plessner just seemed to fit in well, I suppose, with what I was already thinking" (81). See also *PMG*, 18.

²³Although I specify some important things in the rest of this paragraph, the simple answer to the query about what Grene accepts of the perspective she and Polanyi work out in their collaboration is this: most everything one finds in Polanyi publications about knowing and human persons. In *PMG*, Grene does note that it is "probably correct... that my years of working with Polanyi have continued to influence my thought and writing, more than I have recently recognized" (61). It is perhaps easier to identify elements that Grene rejects or seems not to be enthusiastic about as her own study turned in new directions than to specify what she shares with Polanyi. Grene says relatively little about what might be called the political philosophy themes in Polanyi. Grene is concerned with persons and knowledge but her philosophical orbit simply does not seem to touch some of the larger social themes that were central to Polanyi as a *fin de siècle* Hungarian Jewish scientist who fled two countries in the first fifty years of the twentieth century. Grene eventually comes to reject what I will simply dub openings to religion of which there are many in Polanyi's writings. She thinks such openings are unwarranted and are certain to turn off philosophers of science who might otherwise take Polanyi seriously. Although she early was a defender of Part IV of *PK*, eventually, as I have noted above, Grene comes to believe Polanyi's discussion of evolution is misguided. His biology is outdated and his larger philosophizing about evolution she seems to think is too grand or at least is likely to put off most scientists and professional philosophers. Perhaps these three areas can be pulled together by saying that as Grene continues with her own work she seems increasingly uncomfortable with the way in which Polanyi weaves elements of a *Lebensphilosophie* with his account of persons and science, and with his epistemology and his cosmology.

²⁴See Compton's discussion in "Marjorie Grene and the Phenomenon of Life," 355-356 as well as Grene's comments on the debate in philosophy of science in *PT*, 115-123. Generally illuminating of her realism is her chapter in *PT*, "The Primacy of the Real" (113-126), which often references Polanyi and Merleau-Ponty. Her title she says identifies what she is looking for, which "is something like what Merleau-Ponty expressed in his thesis of 'the primacy of perception' (115). She has tried and discarded various other tags for her brand of realism (such as "comprehensive realism") which she acknowledges is akin to Polanyi's realism, "a feature of his argument that I still heartily subscribe to" (*PMG*, 61).

²⁵Note her 1991 discussion of commitment: "Purged of its Christian over- or undertones, however, the Commitment chapter [in *PK*] with the argument that builds up to it still seems to provide an appropriate foundation for a philosophy of science, a theory of knowledge, and a perspective on the nature of responsible personhood. As I have already noted, it is a precarious foothold rather than a firm foundation, but in our situation I believe that is the best we can do. . . Commitment, however, has, I should think, to retain its precarious ontological position as the stance of a given embodied person, cast ephemerally into the flow of history, and pre- and posthistory, self-obliged to obey a calling that takes him (her) beyond the confines of subjective preference" ("P and S," 14).

²⁶“Responsible human beings, as I understand them, are natural entities who have achieved personhood through participation in a culture (or a spectrum of cultures) itself contained within nature” (*PMG*, 100). In another place she says, “we need in philosophy . . . to recognize that there is a living world of which we are part. Being-in-a- (human)-world is our way of being-in-an environment, as all living things are, and in particular as one variant of the way all animals are” (*PT*, 76). Grene appreciates the way in which Polanyi’s account of science and his theory of tacit knowing focuses both on the kinship of living things and the distinctiveness of human possibilities and human endeavors such as serving self-set standards in responsible scientific inquiry.

²⁷She notes, “I think that both the realism of Polanyi’s account of science and my own long-time weakness for realism-whenever-possible contributed to my enthusiasm for Merleau’s work” (*PT*, 129). Interestingly, she suggests that later in her life it is this same “weakness for realism-whenever-possible” that leads her from Merleau-Ponty who emphasizes the “primacy of perception,” to the ecological perceptual psychology of the Gibsons, where an even better realistic account of perception is worked out (*PT*, 129ff). See my discussion below.

²⁸To David Depew, in *PMG*, Grene comments that Merleau-Ponty’s phrase the “primacy of perception” is “not easily generalized except on the later ground of Gibsonian ecological psychology. It certainly does not apply to Polanyi, whose view of sensory experience was necessarily limited to what was available to him at the time. And his from-to model of knowledge stems from his reflections about science rather than being directed to everyday perceptual experience” (311). I suspects this overstates matters.

²⁹In *PT*, Grene notes: “Nor, I admit, can I accept nowadays the sharp distinction, as Kant insisted on it, between perception (or, more generally, ‘intuition’, *Anschauung*) and thought (concept, *Begriff*)... But if thought without perception is empty (as it is), perception, on the other hand, is always already in some primordial way ‘thoughtful’ or ‘conceptual’” (34-35).

³⁰As I have noted above, she has in mind that Heidegger and Sartre did not treat it in the right context. She does seem to think, soon after she discovers Merleau-Ponty that Polanyi’s theory of tacit knowing is an appropriate context within which to discuss being-in-a-world. She notes in *KK* (1966 but written earlier) a connection between Polanyi’s ideas about indwelling and “the existentialist thesis that our being is *being in a world*” (56). She follows with this claim about mind: “This interpenetration of ‘self’ and ‘world’ is not only a central characteristic of mind; it is what mind is” (56).

³¹Marjorie Grene, “Merleau-Ponty and the Renewal of Ontology,” *The Review of Metaphysics*, vol. 29: 606. All pages noted in parentheses in the remainder of this paragraph are citations to this article (605-625).

³²Any reader of her discussion of Merleau-Ponty’s ontology who is thoroughly familiar with Polanyi’s thought will, of course, recognize similar themes (e.g., an attack upon one-level ontology, affirmation of hierarchy, etc.) in Polanyi.

³³In *PT*, she notes that “my insistence all along on understanding ourselves as living, although I didn’t derive it from him [Merleau-Ponty], certainly harmonizes well with his stress on the importance of the lived body” (81).

³⁴Eleanor Gibson’s work continued that done earlier with her late husband and Grene become a friend of Eleanor Gibson. See *PT*, 130 for Grene’s account of how she came to be acquainted with the Gibsons and ecological psychology which she began work on in 1969. Until she read James Gibson’s last book, *An Ecological Approach to Visual Perception* (1979), she did not recognize ecological psychology as an important venue to be mined to state her philosophical views.

³⁵“The Primacy of the Ecological Self,” *The Perceived Self: Ecological and Interpersonal Sources of Self-Knowledge*, ed. Ulric Neisser (Cambridge: CUP, 1993): 112-117. Cited hereafter as “PES.”

³⁶Clearly, Grene makes the same criticism of Polanyi, although she apparently thinks Merleau-Ponty better represented perception than Polanyi: “. . . my previous mentors, Polanyi and Merleau-Ponty, had both

lacked an adequate theory of perception on which to base their views” (*PMG*, 22). She also laments “the difficulty of Merleau’s rhetoric” (*PT*, 131) and apparently thinks the work of the Gibsons will be more readily assimilated by philosophers, a point that I am not so sure about.

³⁷Greene regards the Gibsons as philosophical realists who are doing experimental psychological research keenly attuned to the way animals have capacities to pick up information in the environment. In the course of evolution, animals, including human acculturated animals, develop perceptual systems, enabling them to cope with threats and opportunities in their particular environment. She claims the ecological account of perception “follows the richer and biologically more appropriate ecological aspect of the Darwinian tradition” (*PT*, 142). The Gibsons’ ecological approach to animals is a realist approach that puts the problem of knowing and the problems of being a person (as Polanyi and Merleau-Ponty also affirmed but less rigorously) in a natural and evolutionary context: “For Gibson (or the Gibsons). . . as human reality is one version of animal reality, so human knowledge is one species-specific version of the ways that animals possess to find their way around their environments” (*PT*, 144). This is a deeper way to put the matter she put in the preface to *KB* where she first says knowledge is “orientation.” Of course, by the time she discovers the Gibsons whose evolutionary orientation she much appreciates, she has long ago changed her mind about the worth of Polanyi’s effort to link tacit knowing tightly to evolutionary development (i.e., Part IV of *PK*).

³⁸In *PT*. Greene notes that James Gibson contrasts perception which is “direct but already cognitive, though tacitly so with the indirect avenues to contact with reality mediated by human tools, languages, and pictorial representations” (145). Her discussion continues, focusing on Gibson’s discussion of several kinds of what she calls “indirect knowledge” (148), which she links to Polanyi’s discussions of subsidiary and focal awareness.

³⁹In *PMG*, she also responds to Jacquelyn Kegley in a similar way: “. . . I want so much—again, as an anti-Cartesian—to avoid any systematic use of the concept of consciousness, let alone self-consciousness, in my reflections about our peculiar way of life” (81-82).

⁴⁰“Marjorie Greene and the Phenomenon of Life,” 354.

REVIEWS

Philip Clayton and Jim Schaal (eds.). *Practicing Science, Living Faith: Interviews With Twelve Leading Scientists*. New York, Columbia University Press, 2007. Pp. vii+250. ISBN-13978-0-231-13576-4. \$29.50/119.00 cloth.

This book is an outcome of the second phase of the Science and the Spiritual Quest programs of the Templeton Foundation. It is distinguished by how it lifts up and probes the ways that living faith is expressed in the work of twelve leading scientists. The book reports in dialogue form the interviews with these scientists just as they occurred. This focus on the way these scientists live their faith in their research and life is deeply akin to Michael Polanyi's understanding (though not mentioned by the authors) of the inseparability of faith as trusting and relying tacitly on a framework of fiduciary coefficients in the practice of science. The scientists interviewed represent global, religious, gender, national, and disciplinary diversity. Yet they are all unanimous in showing that scientists are not necessarily in conflict with spiritual and religious life and are motivated in their research by their particular spiritual or religious inclination. There are six men and six women scientists telling the story of how they became involved in science and how their spiritual orientation is involved in their educational development and work as leaders in their specific areas of research.

While far from comprehensive, the twelve interviews show continually themes of interdependence and complementarity between the scientists' practice and their particular spirituality. In chapter 1, Jane Goodall, British primatologist, a spiritual and ethical naturalist tells her amazing story of modifying the traditional methods of objective research and observation to include the feelings of the chimpanzees. In chapter 2, Hendrik Pieter Barenregt, Dutch meta-mathematician influenced by Montessori schooling in "self

control of error" and Buddhist meditation found that mathematical judgments such as "that's correct" parallel Buddhist phenomenology. In chapter 3, Khalil Chamcham, Moroccan astrophysist and Muslim, studies the evolution of galaxies. Chamcham through the Sufis finds that his faith drives him to be open to different and new ways of understanding. In chapter 4, Donna Auguste, a computer scientist from Berkeley, California and a devout Baptist with family ties to Louisiana's African American and Native American traditions finds her faith to encourage her in problem solving, using both analytical and intuitive approaches, guiding her to develop computer science as a way of leveling the playing field among different social groups. In chapter 5, Ursula Goodenough, a cell biologist who is a non-theist (see the discussion of Goodenough's religious naturalism in *TAD* 28:3 (2002-2003), 29-41) but active in the Institute for Religion in an Age of Science finds ultimacy in her experience of nature through her scientific work which she describes as "a covenant with mystery." Most important to her "is what is." In chapter 6, Thomas Odhiambo, a Christian and entomologist in Kenya made a significant contribution to agriculture through his research on insect physiology. From his African sense of humanness as *ubuntu*, a person is more than body, and connected with family and community, he sees life in a holistic framework. In this framework, Odhiambo finds a continuity of all life forms expressing the mind of the "Supreme (God)."

The remaining six chapters continue this rich global and diverse inquiry into what leading scientists practice in their research and spirituality. In chapter 7, Faraneh Vargha-Khadem, neuroscientist, born in Iran, did her graduate study in Canada and the United States before going to London to create the first academic department of developmental cognitive science at the Institute for Child Health. She is a specialist in the selective nature of memory and discoverer of developmental amnesia. With her Baha'i tradition, she finds at their deepest levels a unity between science and reli-

gion that counters the common notion of a great difference and also rejects the idea of the reducibility of mind to the physiology of the brain and its chemistry.

In chapter 8, Pauline Rudd, British biochemist and specialist in understanding the immune system is the spouse of an Anglican parish priest and articulates her views with theological sophistication. Rudd sees rationality in science and in religion as similar even though one cannot test religion like one tests science. She opposes the genetic determinism that individuals are solely the result of their genetic inheritance and their environment because organisms have free choice and are able to adapt. Speaking of God's presence, she rejects the idea of God's direct action in the world in miraculous interventions but sees God's presence in scientific work as like "like a friendship: something very strong requiring the best of me."

In chapter 9, Dr. Satoto (his full name by his Indonesian tradition) is a physician and clinical nutritionist shaping public policy that has improved the lives of children in several countries. Raised in a devout Muslim household, he sees his work as a form of devotion. He found that presenting family planning and good nutrition succeeded better when presented from an Islamic point of view and with quotations from the Quran because pleasing God is important in a predominantly Muslim population. For him, Islam and science support each other in the pursuit of truth. In Islam, God gives new insights through the *sunnatullah*, the natural laws of life. Anyone who follows this method can make discoveries and even make atomic bombs which shows why ethics matters. The truth you find depends very much on the objective.

In chapter 10, Paula Tallal, an American experimental psychologist and clinical psychotherapist is a specialist in language development, especially as it affects children. From a Jewish heritage, she added Christian practice of prayer to her life during her research on auditory processing disorders in children. She opposes the views of Chomsky and others that human language is innate. From her research, she finds that rather than coming into the world with language

universals waiting to be tuned up, we come in with basic neural processes that are common to lower species as well. Learning from the environment interacts with the neural substrate, and this interaction is what creates each individual brain. This view has led her and her associates to new methods for developing language abilities in children. At the spiritual level, Tallal feels that one's purpose in life is to discover the gifts they are given and then to learn how to give them to others. In her finding a new way to help children with language processing difficulties, she has also discovered the conflict between being an objective scientist and an advocate for a new therapy.

In chapter 11, Henry Thompson, an artificial intelligence and cognitive scientist, was educated in a Quaker school in suburban Philadelphia, did his graduate study at University of California at Berkeley, and is in the Division of Informatics at the University of Edinburgh. He is also influenced by the Dominican Catholic theology of his wife's tradition and finds his Quaker background combines well with hers, especially in their intellectual and contemplative emphasis. He says there is more to reality than the physical world and this means taking responsibility for ethical decisions such as computer scientists refusing to support a defense program that would allow computers alone to launch nuclear weapons. Similarly, Thompson rejects the idea that computers are capable of responsible moral decision making. He asserts that there is a major mistake in equating "like" and "is" in comparing computers with human beings.

Finally, in chapter 12, Robert Pollack, biological scientist, religion professor, lecturer in psychiatry and director of the Earth Institute's Center for the Study of Science and Religion at Columbia University tells his story of how he was drawn into science by the experience of discovery. Beginning with physics, he learned the principles of looking for the simplest possible system, stripping away all variables, and matching the simplest building blocks with the minimal definition of life. In short, he says physics provided the approach that led to molecular biology and the discovery of the genetic code. Pollack finds that his Jewish tradition

helps him to know that certain ethical behaviors in science are better than others. Respect and responsibility for someone else's free will are more important than telling someone else what to do. He also describes his facing the way science can become a faith and idolatrous by making the claim that everything is knowable by science since such a statement itself cannot be tested by science.

This book's very brief survey indicating the variety and scope of spirituality present in science across the world contradicts the simplistic view that science and religion are at war with each other. The book is a major collaborative work of many persons, much like a scientific project itself. The principal interviewers, Philip Clayton and Jim Schaal (as well as additional interviews by W. Mark Richardson and Gordy Slack) are skillful in eliciting the distinctive views of each scientist and avoiding prejudicial language and concepts so that the reader has a sense that the scientists each speak in their own voice and out of their experience. The consistent and clear report of these interviews also deserves commendation for the editorial staff: Jim Schaal, Holly Vande Wall, Zack Simpson, Helen Bishop, and Kevin Laird. Because of its rich expression of the ways that leading scientists live and practice their faith, the book is useful for persons questioning if science and spirituality can relate to each other. It is also useful to the deeper arguments carried on by philosophers, theologians, and scientists by reminding them of the encompassing life-world of every person who does scientific research.

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Elizabeth Newman. *Untamed Hospitality: Welcoming God and Other Strangers*. Grand Rapids, MI: Brazos Press, 2007. Pp. 224. ISBN 978-1-58743-176-0. \$25.00 pb.

Untamed Hospitality: Welcoming God and Other Strangers is part of a series that aims to articulate Christian perspectives on common practices of contemporary daily life. Some *TAD* readers may recall that Christian theologian Elizabeth Newman wrote an earlier

TAD article included in an issue on post-critical ethics ("Accepting Our Lives as Gift: Hospitality and Post-Critical Ethics" 29:1 [2002-03], 60-73); her book follows upon and further explores—in very challenging ways—some of the themes touched on in her article. The opening two chapters treat "the theological and liturgical convictions that ought to sustain our practice of hospitality" (18). Newman first discusses what she regards as the many contemporary distortions of hospitality and then articulates "an understanding of hospitality as rooted in the faithful worship of God" (18). Developing some of the comments about ritual in William Poteat's writing, Newman suggests that hospitality "is a kind of timescape, a way of being in space and time that induces certain disclosures" (22). Worship, Newman argues, should be understood as hospitality: "when God gathers us to worship, we are brought by the power of the Holy Spirit into worship already taking place in the life of God" (18). Thus worship is "our participation in divine hospitality" (18); it is our engagement in the "primary ritualized place where we learn to be guests and hosts in the kingdom of God" (18).

The second component of *Untamed Hospitality* (chapters 3-5) focuses on "hospitality as a vigilant practice" (72). Here Newman explores how the practices of Christian hospitality challenge the "powers and ideologies" (72) at work in contemporary culture. She has sharply critical chapters on the influences dominant in three domains of contemporary cultural life: (1) science and economics, (2) ethics and (3) politics and education. Christian hospitality rightly understood and practiced "gives us a vigilant place to stand to see how easily various cultural assumptions and practices can distort our lives" (72). Newman offers a scorching critique of many components of contemporary American culture. Scientism reigns and it claims science is the universal story that can unite us; evolution is a component of that story which emphasizes how the world "is and is intended to be" and this perspective "denies the plenitude of God" (80). Pluralism at least as it comes to us in American dress trivializes our particularities and serves the global economy rather than God's *oikonomia*. Insofar as we

overenthusiastically embrace the market as a model of society, we develop constricted imaginations of ourselves as primarily individual competitors. Christian hospitality is not governed by economic notions about scarcity, efficiency, and production and consumption of goods. Newman thus sets forth a thoughtful account of the colliding myths, stories and virtues extant in contemporary culture in her discussion of science, economics, and Christian hospitality.

Her discussion of modern ethics focuses on the ways in which Enlightenment thought, compounded by several centuries of cultural, scientific and economic developments, leaves us thinking about moral life in terms of an individual, potentially rational, subject equipped with the searching capacity to doubt and to seek universal foundations. Human beings are the creatures who construct themselves with their choices. The postmodern turn has re-tuned this outlook by giving up on universal foundations in favor of a tolerant pluralism and exaggerated vigilance about the ways in which knowing inevitably is linked to power and domination. Against all of this, Newman argues for themes emphasizing the particularity and givenness of our lives and, using religious images, our election and the need to accept our gifts, including our participation in God's cosmic drama.

Newman's chapter on higher education is more diffuse than her incisive indictments of science, economics and ethics. It is clear that she thinks much in the university is amiss and that Christian hospitality properly lived can provide an alternative to the status quo. "[P]ractitioners of Christian hospitality must accept their 'madness'; that is, they must accept how radically differently they are called to live, teach, learn, and be from what modern politics, dominant in the academy, allows" (124). Certainly Newman does not like the modern liberal democratic sentiment that identifies religion as a private and individual matter that should not be absolutely central to politics; all this plays itself out in the university, socializing students to be temperate pluralists accepting a "story of the world at odds with the story of biblical creation and Christianity" (131). Pluralism, the polity of the modern

academy, imposes a "culture of choice," which ultimately "underwrites a market approach to education, fueled by self-interest and competition" and "such an approach makes desiring and loving the good unlikely" (131). Even Christian colleges and universities often are "embracing the politics of liberalism/pluralism" and are therefore "shoring up the power of the nation-state and contributing to the ongoing domestication of the church" (137). Newman calls for a new politics, one that "is ultimately discovered in and through worship" (138) and which "has to do with ordering the lives of persons who are members one of another, rather than arranging the lives of individuals" (138). Education must become "formation in how to love the good" rather than merely a facade "supporting ways of life in which no good is worth loving" (140). Particularly repulsive, Newman finds the academy's emphasis upon tolerance (understood as restraint) whose antidote is hospitality which "serves the good communion with God" (144) that allows, despite its messiness, truth-seeking and truth-speaking in human affairs.

The final division (chapters 6 and 7) of *Untamed Hospitality: Welcoming God and Other Strangers* is a discussion of how hospitality as a necessary practice for the Christian church can provide a transformative unity in the Christian church. In truth, this last section is an interesting effort to work out a Eucharistic theology. Christian worship is participation in "the triune hospitality of God" (147) and this participation is intensified in communion where communicants are "feasting upon the self-giving of the Son in the body and blood and united with Christ to become his body for the world" (147). Newman argues that Christians, divided though they are, must recover "the Lord's Supper as a liturgical and political drama in which we participate, one that offers an alternative to other dramas that easily determine our lives" (150). I cannot do justice here to the several fascinating dimensions of her analysis, but certainly one interesting nuance is her claim that it is crucial to move beyond "constricted understandings of the Lord's Supper" (155) which dichotomize and quibble about matters such as symbolic and real presence. Following Potat, she suggests that "some mythos always forms our under-

standing of the ‘real’” and this means that “the deeper question to ask is not symbol or real? but rather, which reality is shaping the past, present, and future of our lives?” (156). For Newman, it is “God’s remembrance of us” (158) and the cosmic drama unfolding in God’s time that is important and it is the Eucharist that is the celebration of God’s cosmic drama that reconfigures our bodies (i.e., our domains for embodiment) which have become warped by other stories and dramas. In her final chapter, Newman turns to the concrete to look at some “faithful practitioners of hospitality” (e.g., the L’Arche communities) whom she identifies as folk making “small gestures” (174) that embody the Christian life informed by a rich understanding of God’s hospitality.

In sum, *Untamed Hospitality* is a deeply reflective and challenging book. It brings together a creative voice doing constructive Christian theology centered on hospitality and a sharply critical prophetic voice attacking what Newman takes to be the idolatries of modern thought and modern American culture. There is a fierce mood of resistance at the core of Newman’s reflection. To use one of H. R. Niebuhr’s ideal types, this is an account of things that falls largely under the Christ-against-culture paradigm. *Untamed Hospitality* draws on a rich array of resources engaged in contemporary philosophical and theological conversation including Alasdair MacIntyre, Stanley Hauerwas, William Poteat, John Millbank and a host of others. Some of Michael Polanyi’s ideas are also directly cited, but Polanyi is a figure more in the background than the foreground. To this reader, it appears that Newman’s leading lights are MacIntyre, Hauerwas and others intent upon unequivocally trashing the Enlightenment and what has grown out of it. Polanyi’s vision was more balanced; while critical of many intellectual and political developments in modernity, he also appreciated some of its achievements. I do not believe post-critical philosophy rejects all Enlightenment values in quite the sweeping way that some of these figures have suggested and that Newman seems to subscribe to. I support Newman’s effort richly to reinterpret Christian symbols; however, I worry about what I can only call her earnest Christian single-

mindedness which I think the Enlightenment and thinkers like Polanyi helpfully tempered. Polanyi warned against modernity’s moral inversion that combined excessive moral passion and objectivism. *Untamed Hospitality* makes me again wonder about the dangers of excessive moral passion at work in new alliances in the post-modern world.

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Doug P. Baker. *Covenant and Community: Our Role as the Image of God*. Eugene: Wipf & Stock, 2008. Pp. xiv + 143. ISBN 1-55635-203-4. \$18.00pb.

One might expect a book on the doctrine of the *imago Dei* to concentrate on issues related to theological anthropology. Doug Baker, however, opts to situate his exposition of the doctrine within a much wider context, one sensitive to range of theological concerns. One might even say that Baker aims for nothing less than a quick but thorough sketch of a personalistic theological cosmology.

Several related theses lie at the heart of Baker’s study. First, he argues that the existence of persons (both human and divine) includes both an individual and a corporate dimension. Second, he contends that the destiny of human persons is to manifest the life and glory of the divine persons. Third, he sees the new life offered in Christ as that which makes it possible for human persons to fulfill this destiny. In and of themselves, these ideas are not controversial, but the originality of Baker’s contribution lies in his unique approach to these arguments.

Baker begins by providing a survey of the ways one typically finds the concept of the *imago* defined. He identifies no fewer than five going options (angel theory, attribute theory, purity theory, dualistic theory, and physical theory) before arguing that all of them fall short of doing full justice to the doctrine. Baker’s chief complaint is that traditional interpretations of the doctrine have applied it too narrowly; human beings, he insists, do not “carry” the image of

God but “*are*” the image of God (14).

A significant portion of Baker’s efforts is taken up with a close reading of various biblical texts related to the doctrine of the *imago*. He pays considerable attention to the question of how the various terms used to describe the creative action of God (i.e., *bara*’ = to create, *yatsar* = to form; *’asah* = to make), first, signify different kinds of purposefulness and thus, second, describe the creation of humanity in the image of God in a way that expresses a particular “goal or intention” (35). Baker also attends to what he sees as a neglected theme in traditional interpretations of the doctrine, namely, the meaning of the term *adam*. His primary purpose here is to suggest that we should understand the *imago* at least as much, if indeed not more, in terms of corporate identity (i.e., humanity as a whole) as in terms of individual identity. Not surprisingly, Baker identifies the interpersonal life of the trinity as the example *par excellence* of a unitive identity fully shared by distinct individuals. He also suggests that the terms used to refer to the *imago* in Gen 1 (*tselem* = representation; *demuth* = resemblance) taken together suggest an allusive meaning that is greater than either one of them alone.

Having introduced the notion that the *imago* signifies a certain purposefulness, Baker next turns to a more fulsome exposition of just what that purpose might be. The implicit intentionality of the *imago* moves us in the direction of eschatology, and specifically the eschatological consummation of the creation in and by Christ. This helps shift the emphasis away from the object of the *imago* (i.e., humanity) to its subject (i.e., God). Baker contends that preoccupation with theological anthropology has obscured the true meaning of the *imago*, which is the revelation of the glory of God in the creation. The biblical image that bears witness to this most clearly is that of the church, itself conceived as the body of Christ, himself the perfect image (or, rather, *ikon*, per 2 Cor 4.4) of the Father and the means whereby the *imago* is restored in fallen humanity.

Consideration of the work of Christ in the

renewal of the *imago* leads Baker into an analysis of the concept of covenant and the way in which it functions in our understanding of God’s creative, redemptive, and consummative activity, and even our understanding of the divine life itself. Covenant is the motif that best enables us to make sense of the means whereby persons enter into, sustain, and intensify relationships with one another; here Baker employs Polanyi’s understanding of indwelling as a means of articulating how it is possible for persons to exist in relationships of interdependent mutuality. Baker also finds the experience of marriage a potentially fruitful way of reflecting on the reality and meaning of mutual indwelling.

Covenant also provides Baker with a starting point for thinking about the consequences of evil on the *imago* and the restoration of the *imago* in and by Christ. Evil does not abrogate human identity as *imago Dei*, but it does hinder our capacity to realize our destiny as such. The new life offered by God in Christ signifies, not a restoration of some primordial state of purity, but an even more fulsome capacity for fulfilling this destiny. The image of God revealed in *adam* at the consummation of creation thereby becomes, not just an end, but a new beginning.

Baker’s efforts make for an interesting approach to some familiar questions, but certain aspects of his work would likely require significant development in order for him to proceed much further. He leans heavily on the scriptures, but seems to rely on what might be called a dictation theory of inspiration; plumbing the depths of the biblical witness would require a more flexible hermeneutic. Similarly, he sometimes employs an anachronistic reading of the scriptures as a way of smuggling in more dogmatic content than the texts can bear. He occasionally makes use of language that invites further clarification of his understanding of the doctrine of the trinity (e.g., referring to the Spirit as both the “sister” and the “bride” of the Son, 107). None of these criticisms, however, undermine the essential insights at the heart of Baker’s project.

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