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The Polanyi Society

Preface

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This issue includes an interesting article by Spencer McWilliams, a psychologist, who draws out parallels between Polanyi and George Kelly's Personal Construct Psychology. It also has an article by Phil Rolnick which explores Polanyi's assumptions about progress. The essay is an extensively revised and expanded version of a paper given in 1991 at the American Academy of Religion Polanyi Society meeting; it was an effort that produced an animated discussion. At the end of Gelwick's "News and Notes," he mentions that William Poteat will be the special guest at the upcoming Polanyi Society meeting in Washington in November. In the next issue of *TAD*, there will be more about this, including an article on Poteat and his use of Polanyi's thought. Poteat's new book, *A Philosophical Daybook* (and his old book, *Polyanian Meditations*), is good preparatory reading for the Washington meeting.

Electronic Polanyi: INTERNET List Access

Through the good work of Polanyi Society member John Apczynski and the folks at Saint Bonaventure University, The Polanyi Society now has an electronic "discussion list." In my "Preface" to *TAD* 18:3 and *TAD* 19:1, there were a few comments about John's efforts and the eventual uses of an electronic address which interested persons across the world can tap into. A "discussion list" is obviously a place where people can exchange ideas; hopefully, it will serve both those in The Polanyi Society as well as persons who are not yet thoroughly familiar with Polanyi's writing. Materials, such as the papers which are written each year for Polanyi Society meetings, can be made available electronically. This will save meager Society funds. Eventually, perhaps some *TAD* materials can be electronically archived. Andy Sanders in Holland will be using the "discussion list" to manage a bibliography project on Polanyi; the next issue of *TAD* should provide some details about this immediately forthcoming electronic endeavor.

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Tradition and Discovery is indexed selectively in *The Philosopher's Index* and *Religion One: Periodicals*. Book reviews are indexed in *Index to Book Reviews in Religion*.

NEWS AND NOTES

JOHN PUDDEFOOT, Head of the Mathematics Department at Eton and Coordinator of the CONVIVIUM Group in the United Kingdom and on the Continent is one of the featured leaders of a conference on “Science and Theology: Questions at the Interface” to be held at Dunedin, New Zealand, August 15-21, 1993. Other speakers are Norma Emerton, DANIEL HARDY (Director of the Center for Theological Inquiry at Princeton and speaker at several Polanyi centennial meetings), John Polkingorne, and Carver T. Yu.

POLANYI AND EDUCATION. Last year The Nation asked educators, public school activists, scholars and writers to tell them about a book on education, written in the twentieth century, that they would propose as a tool in the struggle to uphold the idea of democratic schooling today. The editors of The Nation are concerned about the political right’s attack on the U.S. public school as a history of “failed experiments.” One of the persons asked was Howard Earl Gardner, a psychologist, professor in the Harvard Graduate School of Education. Gardner is the author of six very interesting books: The Shattered Mind (1975), Art, Mind, Brain (1982), Frames of Mind (1983), The Mind’s New Science (1985), To Open Minds (1989), and The Unschooled Mind (1991). He has also been the director of a major educational research program known as “Project Zero.” Gardner’s choice of one book written in this century that would serve to aid the preservation and development of free public education was Personal Knowledge. In the brief space that he was allowed, Gardner wrote for the September 21, 1992 issue:

I’d like to use this opportunity to call attention to a deep meditation on the nature of teaching and learning - Michael

Polanyi’s Personal Knowledge (University of Chicago). A scientist by training, Polanyi contends that the most crucial forms of understanding can never be achieved simply by reading or listening to lectures in a schoolroom. It is crucial that learners, of whatever age and persuasion, participate in a community in which experts use their knowledge in meaningful ways.

Much, perhaps most, of what a scholar or scientist or sculptor or surgeon knows or does can never be captured in words; it must be absorbed by an extended apprenticeship in the presence of that expert. Moreover, learners can only become part of such a community if they themselves come to have a personal stake in that knowledge, a passion for it, a sensitivity to its uses and its abuses.

Reading Polanyi will not tell you how to prepare a lesson for Monday morning or how to lead a protest against an action of your school board. But Personal Knowledge will remind you of what education can be like and how we must radically reconfigure our institutions if we are to have a citizenry that wishes to understand, that can create a new knowledge and that cares about community.

Howard Gardner’s article led me to search the computer online files of ERIC (Educational Resources Information Center) for Polanyi which turned up the following list that includes some members (NAMES IN CAPITALS) of our Society. The list for 1982-93, reported the following:

ROBERT P. INKSTER, "Should We Outgrow Personal Writing? Polanyi and Perry on Reality, Truth, and Intellectual Development." Paper presented at the Annual Meeting of the Conference on College Composition and Communication, Cincinnati, Ohio, March 19-21, 1992. Available from Eric Document Reproduction Service, #ED345247.

DENNIS CATO, et al, "Harvey Siegel's Transcendental Rationality: A Polanyian Perspective." Educational Theory, 38, no. 2, Spring 1988, pp. 255-74.

Mary Jo Sibbald, "Enriching the Tacit Structure: Art and Subsidiary Awareness." Design for Arts in Education, 89, no. 5, pp. 28-32, May-June, 1988.

Deborah J. Trumbull, "Practitioner Knowledge: An Examination of the Artistry in Teaching," Journal of Educational Thought, 20, no. 3, December, 1986, pp. 113-124.

Charles Bruckerhoff, "Teaching and Intentionality: How Models of Teaching May Be Informed By Purpose." Paper presented at the Annual Meeting of the American Educational Research Association, Washington, D.C., April 20-24, 1987. Eric Document Reproduction Services, #ED280811.

Wayne D. Bowman, "Polanyi and Instructional Methods in Music." Journal of Aesthetic Education, 16, no. 2, Summer, 1982, pp. 75-86.

Nancy Ainsworth, "Oral Narratives of Bilingual Mexican-American Adults Enrolled in Adult Basic Education. Final Report." 1981. Eric Document Reproduction Services, #ED228852.

Aviva Freedman (ed.), "Reinventing the Rhetorical Tradition." 1980. National Council of Teachers of English, 1111 Kenyon Rd., Urbana, Illinois 6180, Stock #39876.

Finally, a note and journal copy from WALTER THORSON lets us know that our distinguished member, THOMAS F. TORRANCE, published in the 1992, Fall issue of Touchstone: A Journal of Ecumenical Orthodoxy an article supporting the ordination of women. The article has stimulated a strong response in the Winter issue.

Remember to include William Poteat's works in your summer reading. We will have a special opportunity to discuss with him at the November meeting of the American Academy of Religion in Washington, D.C.

Richard Gelwick, General Coordinator

Indeterminacy and the Construction of Personal Knowledge

Spencer A. McWilliams

ABSTRACT Key Words: indeterminacy, constructivism, Personal Construct Psychology, post-critical philosophy.

Polanyi's post-critical philosophy contains a tension between the personal commitment of the knower to the apprehension of knowledge and the understanding of the incomplete, or potentially mistaken, nature of current understanding. This essay addresses this tension, both theoretically and practically, by drawing parallels between Polanyi's theory and George Kelly's Personal Construct Psychology. The two approaches share many similar assumptions about the development of knowledge. Application of Kelly's perspective may assist us in developing direct awareness of our active participation in creating knowledge, and helping us to articulate some of our underlying assumptions. Such activities facilitate movement toward more comprehensive understanding.

Philosophers of knowledge have recurrently addressed the relationship between knowledge and truth, and more particularly have questioned whether we may consider our knowledge as objective (Lewin, 1991). Polanyi's (1958; 1969) post-critical philosophy presents a refreshing and potentially liberating perspective on these issues. Polanyi described personal knowledge as an active process based on a knower's awareness of coherence among particulars previously seen as independent or uncomprehended, an experience of something hidden but now potentially available to understanding. We come to see the particulars that we originally held in focal awareness as manifestations of a more comprehensive entity and we then experience them subsidiarily within the focal awareness of the new entity. Belief in the universal validity of the entity, a belief often tacitly held in the context of unarticulated and unarticulable assumptions and faith, drives our commitment to explicating the entity in a way that others may find compelling.

Polanyi viewed commitment to this way of knowing as inherently hazardous. We presume that this comprehensive entity actually exists, and thus it may reveal itself in a number of unpredictable ways. It may later appear radically different than what we originally anticipated. Since we derived the original conception of the proposed entity from a small set of particulars, further awareness may reveal a wide variety of additional particulars and implications that range far beyond the initial conceptualization. Thus, we might find it useful to assume that our current ideas or concepts about the universe, or its individual comprehensive entities, whether tacitly held or well articulated, do not reflect ultimate truth. Knowledge of reality must, inevitably, remain indeterminate.

Polanyi believed that the pursuit of higher order understanding takes place in the context of a passionate and personal commitment to incipient knowing. This commitment involves dwelling within tacitly held beliefs and assumptions that may remain mostly unconscious, and pursuing that knowledge with universal intent. Awareness that knowledge remains indeterminate may create an apparent paradox in the process of personal knowing, to the extent that we recognize the partial, and possibly erroneous, nature of this knowledge. I suggest that as seekers of knowledge we must embrace the tension between the indeterminacy of our knowledge and our commitment to it, in order to pursue new understanding and yet avoid the tendency to accept prematurely a particular interpretation or believe that we have arrived at a final truth. Although we might assent to this proposition, we may find some difficulty in applying it to our own understanding. An appropriate psychological model might provide us with some useful practical assistance in addressing the necessary balance between commitment and indeterminacy.

This essay attempts to elaborate on this issue by comparing certain Polanyian concepts to relevant ideas

within the language of constructivist psychology. I suggest constructivist psychology as particularly compelling because of its consistency with, and relevance to, Polanyi's view of human knowledge. Constructivist approaches to psychology [e.g., Piaget's (1970) genetic epistemology] view people as responding to a reality they have constructed from experience, rather than assuming they react directly to an objective environment. In order to understand human processes, the psychologist must examine the personal interpretations by which people give meaning and predictability to their encounters. Mahoney (1988), in an extensive explication of constructivist metatheory, emphasized its personally proactive and creative stance toward the development of knowledge, and provided a good overview of the history of constructivism and its current proponents. From a constructivist perspective, we acknowledge a real world, but understand that we can never perfectly know it. It also includes a view of human knowledge as an organized system in which higher order processes, portions held tacitly and unconsciously, govern and constrain the evolution of personal knowledge. Finally, it agrees with Polanyi that we can never fully justify knowledge, which must inevitably rest upon a personal claim.

The Human Construction of Alternatives

Among constructivist psychologies, the Psychology of Personal Constructs (Kelly, 1955; 1979) provides a particularly suitable framework for addressing the issue of indeterminacy in the pursuit of personal knowledge (McWilliams, 1988a). Both Polanyi and Kelly published their major theoretical works in the 1950s and 1960s. Although I did not locate any direct reference to Polanyi in Kelly's published writings, the approaches of Kelly and Polanyi complement each other very well and many of Kelly's followers have cited Polanyi's theory and have drawn parallels between the Kellian and Polanyian perspectives (e.g., Mair, 1977a, 1977b, 1979; McWilliams, 1988a, 1988b; Morris, 1977; Radley, 1977; Thomas, 1979).

Kelly and Polanyi used intriguingly similar root metaphors. Polanyi described the scientist as a "personal knower," while Kelly described the knower (humans in general) as a "personal scientist." My desire to understand and further elaborate Kelly's metaphor led me to Polanyi's work, which provided me with a deeper understanding of the implications of viewing people as scientists. Both Kelly and Polanyi emphasized the active, personally constructed nature of human interpretations and a cautionary orientation to the relationship between those constructions and the reality they purport to represent. Kelly and Polanyi also agreed on several major assumptions about the relation of knowledge to reality: an inherently orderly universe actually exists, humans behave so as to come to know it, and they come to know it through a personally meaningful process based on perceiving recurrent patterns or themes among the particular events of their lives. Finally, both approaches emphasize the deep personal involvement of the individual in the process of knowing and the necessity of personal commitment to the articulation and elaboration of our understanding.

Kelly's personal scientist metaphor reflects his suggestion that we might usefully understand human psychological processes by acting as if all people operate under the same principles with which scientists claim to operate. Thus, we might view people in general as constructing a theoretical model of the world with which they have interacted, deriving from that understanding hypotheses that lead to predictions about specific situations, testing their hypotheses through their behavior, and revising their understandings on the basis of the consequences of their actions. Kelly further believed that we might usefully approach our presently held knowledge as a human invention, actively constructed to help us to predict particular events. From Kelly's viewpoint, each individual attempts to make meaning from experience by noting both comparison and contrast in the recurrent patterns among particular events, seeking general themes and transcending the obvious.

Personal Construct Psychology rests on a philosophical assumption called “constructive alternativism,” the proposition that we may subject all interpretations of the universe to revision and ultimate replacement. Kelly contrasted this assumption with a view he labelled “accumulative fragmentalism,” the belief that current human knowledge consists of “jigsaw puzzle” fragments of ultimate truth and that we elaborate it by accumulating more fragments until we know everything. Within Kelly’s model, we may revise our interpretations during the process of articulation and may ultimately replace them as we develop even better understandings. Kelly even applied this understanding to constructive alternativism itself, suggesting that some future understanding will ultimately replace it as well.

Kelly suggested that we might find utility in approaching all beliefs or interpretations as tentative and *ad interim*, with the expectation that we may discard them in favor of more useful beliefs that we will construct in the future. He proposed that the exact correspondence between human constructions and reality lies at some infinite point in the future. Kelly clearly modeled the application of this perspective when he applied it directly to his own theoretical position.

The theoretical statements propounded are no more than partially accurate constructions of events which, in turn, are no more than partially perceived. Moreover, what we propose, even in its truer aspects, will eventually be overthrown and displaced by something with more truth in it. Indeed, our theory is frankly designed to contribute effectively to its own eventual overthrow and displacement (Kelly, 1979a, p. 66).

Kelly designed his model explicitly to reflect upon itself — as a theory about how people develop theories. Thus, what it says of people in general applies equally to itself. This notion of “reflexivity” occupies a key role in Kelly’s position. We may usefully expand the concept of reflexivity to include a conscious stance toward knowledge by making personally applied constructs or interpretations themselves an object of study. We find it more difficult to hold up a concept or belief as truth when we have conscious awareness of the process by which we constructed that idea.

Kelly stated his theory formally (1955), with a fundamental postulate proposing that human processes orient toward anticipation; he also articulated a set of corollaries that elaborate on that proposition. Anticipation occurs through the use of constructs, bipolar dimensions of appraisal that replicate recurrent themes among events. He distinguished constructs from the more classical notion of a concept, indicating that construction includes both comparison (seeing similarity among events) and contrast (seeing differences among events). This process leads us to develop and use dimensions of appraisal that involve contrasting poles. Abstract concepts such as “good vs. bad,” “true vs. false,” or “positivist vs. post-critical” as well as more concrete constructs such as “electrical vs. mechanical” or “baked vs. fried” provide guidelines for seeing repetition and difference and preparing for future implications. Individuals develop construct systems with a hierarchical organization among components, and make choices based on their attempts to make their system more elaborate and effective. The system evolves through the successive anticipation of events, and varies to the extent that it admits new events to its range of understanding. The components of a person’s system may not necessarily relate logically to each other. Although some people see this as a “cognitive” theory, Kelly clearly considered it to deal with the whole person and to encompass emotion, cognition, and behavior.

Application of these theoretical notions led to a variety of methods, called “Repertory Grid Techniques,” for eliciting individuals’ personally meaningful construct dimensions, describing their organization, and providing a basis for reflection on the process of construing events (Fransella & Bannister, 1977). Bell (1988) described in some detail the relationship between components of Kelly’s theory and various repertory grid techniques. The value of these personal construct techniques for the personal knower lies in their utility as a tool for facilitating reflexive analysis of how we use constructs (McWilliams, 1988a). With the advent of computer technology, numerous methods exist for

eliciting constructs from individuals, providing immediate feedback on how they use and relate them, and generating an organizational model (Sewell, Adams-Webber, Mitterer & Cromwell, 1992).

Once we articulate constructs, we may subject them to reflexive study. Kelly (1955) proposed several dimensions of “diagnosis” for appraising how we use constructs. These dimensions themselves serve as meta-constructs: constructs that we can use to view other constructs. Hence, they also function as bipolar dimensions along which we might assess similarity and difference, in this case in the processes of human knowing. We might find several of these dimensions relevant to the open-ended search for knowledge. For example, we can view constructs as incidental, subsuming a small variety of events, or comprehensive, including a large variety of events within their purview (McWilliams, 1988b). We organize constructs with superordinate and subordinate relations to one another, and with lines of implication between these levels. We may use constructs loosely, leading to varying predictions, or tightly, leading to more specific predictions.

Kelly and Polanyi agreed that we cannot always verbalize our understanding; we may “know more than we can say.” Polanyi’s discussion of the “tacit vs. articulate” dimension described how we can never fully articulate the assumptions on which our knowledge rests. Although in fundamental agreement, Kelly’s (1955) psychological approach emphasized ways to assist people in more fully articulating their tacitly held constructions (Neimeyer, 1981), and he addressed this issue by using a construct he called “level of cognitive awareness.” We can describe a construct expressed well in word symbols as having a high level of cognitive awareness (or “articulate”). On the other hand, a person may construe events, and incorporate them into experience, but may not verbalize or otherwise have consciousness of the process. Kelly described this “tacit” state as having a low level of cognitive awareness.

Kelly (1955) elaborated on this dimension by describing several ways an individual might use constructs with a low level of cognitive awareness. Since a complete construct includes both comparison and contrast, its full articulation requires an understanding of both poles of the dimension. An individual may, however, have conscious access to only one pole of the dimension and thus may find difficulty in articulating the entire dimension. In newly emerging scientific knowledge, the scientist may attempt to apply existing concepts to new observations that do not ideally fit the concepts. These newly identified events or patterns may not fall well within what Kelly called the “range of convenience” of the existing theory, the events for which the concepts provide maximal predictive utility. In such cases the constructs do not enable the individual to make precise predictions or discriminations. Additionally, people may remain inarticulate about their constructs if they conflict with other, particularly higher-order, constructs within their systems.

I find Kelly’s *propositional vs. preemptive* construct dimension particularly relevant to the issue of indeterminacy. As with other diagnostic dimensions, it refers not to the constructs themselves, but to how we apply them. A person uses a construct preemptively by restricting its elements or particulars to itself exclusively, often leading to a “nothing-but,” prejudicial understanding. Preemptively, for example, we might say, “Light *is* a wave and nothing but a wave.” Although we find it necessary to preempt in order to solve particular problems, over-reliance on this type of usage grossly restricts the possibilities and denies the prospect of re-viewing or re-interpreting the situation (Bannister & Fransella, 1980). Propositional use of a construct carries no implications about other ways in which we might understand a relevant event. Propositionally, for example, we might say, “Among various ways of looking at light, we might see it as a wave, or a particle, or perhaps as an expression of the Holy Spirit.” Propositional construing leaves events open to a wide range of possibility.

Elaborating on a propositional approach, Kelly (1964) proposed an *invitational* mood to language. The conventional indicative mood of the English language suggests that if we say “Light *is* a wave,” we imply that the quality of “waveness” inheres in the nature of light. The validity of the statement derives from light, and not the speaker. In an invitational mood the speaker takes full responsibility for attributing a quality to an event, and suggests to the listener

that we might consider a particular interpretation of the event. For example, “Suppose we regard light as a wave?” Casting a proposition in an invitational mood leaves the listener in a state of expectation which could lead to further questions, and leaves the subject open to alternate interpretations.

Further developing the suggestion that ideas and reality do not correspond isomorphically, and that our search for knowledge might benefit from considering a wide range of alternative perspectives, Kelly proposed that we do not necessarily have to disprove one interpretation in order to entertain an alternative. In this respect Kelly and Polanyi agree that our potentially fallible knowledge may not directly represent the actual universe, and that reality may reveal itself in unexpected ways. However, pursuit of the implications of their approaches might lead us to take different actions. The constructivist approaches may help to call attention to the participation of the individual in creating meaning. Constructivist theories vary from “weaker,” suggesting some inherent properties to environmental events, to “stronger,” emphasizing the dominant role of the individual (Soffer, 1993). A “strong” approach to constructivism might regard interpretations as propositions that we have personally invented, and suggest that we have no obligation to assume that the universe actually corresponds to these particular constructs. In the process of pursuing our personal knowledge, we might find utility, as well as liberation, in simultaneously entertaining, and committing ourselves to the elaboration of, a range of alternate possibilities.

Commitment and Openness

This discussion began with the question of how a knower can balance the seeming paradox in Polanyi’s understanding of the personal, passionate commitment to the universal validity of presumed knowledge and, at the same time, an awareness that knowledge remains indeterminate. From the Kellian perspective, the knowledge to which we make such deep commitments derives from our personal constructs. Each individual holds personal commitments to certain higher order, core constructs, even when tacitly held, that serve to guide the types of inquiry and interpretations that arise for that individual. We respond emotionally to changes in constructs, whether the changes stem from validation, invalidation, or other outcomes (McCoy, 1977). In a significant sense, each of us has no option other than to “march to the beat of our personal drummer,” even if we hear the beat only faintly.

Similarly, Polanyi (1958) described the extent to which presuppositions that underlie inquiry and interpretation remain unknown and inarticulate. We implement them through a process of “in-dwelling” in which we experience them subsidiarily, in a manner similar to how we experience our bodies, and accept them uncritically. They function as the framework through which we make contact with a deeper reality. In an analogous conception, Kelly (1979b) described the importance of the active application of our constructions. He defined “aggression” as the active elaboration of constructs, an audacious process that involves risking being wrong by committing oneself to the active test of constructs, through direct experimentation. For both theorists the passionate quality of these commitments reflects their compelling nature.

The evolution of knowledge requires that we have the freedom to dwell within personal systems of understanding, use our initiative in testing our commitments, and to contemplate the comprehensive entities toward which this in-dwelling leads. How might we address the tension between our personal commitment to the universal validity of our knowledge and our recognition that knowledge remains indeterminate? I suggest that we can cultivate intentional awareness of our “dwelled-within” or “aggressively tested” frameworks for knowing. Application of a reflexive analysis of the use of personal meaning systems, through observing the constructs and the construction process, could facilitate articulation of this tacit system and enable us to make it more conscious. This proposition

reflects a theme articulated by a variety of approaches to human growth and evolution, whether developmental, therapeutic, or contemplative. Observing the subjective experience and treating it as an object leads to a transformation of consciousness, in which the previous framework for knowing becomes a part or component within a new, higher order framework (Kegan, 1982). This perspective parallels Polanyi's description of the way that particulars once perceived focally become subsidiary in the focal awareness of a more comprehensive entity. Of course, the new framework contains still other tacitly held assumptions, and we can never complete the transformative process to articulation of all assumptions. Examination of the way that personal meaning systems function, and awareness of the personally constructed nature of belief, however, can enable the knower to articulate some of the tacitly held presuppositions shaping belief. Through reflexive processes, in which we articulate the "unconscious" or tacit framework, we might transcend aspects of the unknown nature of the existing framework, leading to the unconscious indwelling with a new higher-order framework (Wilber, 1983) which, of course, contains other tacitly held assumptions.

Conscious awareness of the framework of understanding may appear to contradict Polanyi's statement that significant portions of it necessarily must remain unknown and tacit. Such awareness may also appear to hinder full commitment, and the effective application of skill, because it draws focal awareness away from the comprehensive entity and onto the subsidiary particulars of the knowledge system itself. However, a new, higher order framework generates a higher order skill that might include within it the ability to see beliefs and constructions as hypotheses rather than as reality. This approach also has liberating qualities, for understanding that we do not know ultimate truth relieves us from the burden of seeking external justification for personally meaningful knowledge, even when we have articulated it to a level that others find compelling. Finally, it provides us an opportunity to acknowledge actively our higher level participation in the creation of knowledge, in the context of our awareness of the unity of all phenomena. Thus, it might furnish a method for approaching what Barfield (1988; Hocks, 1991) described as a sustained and experienced acceptance of the intimate connection between human consciousness and phenomena, and for furthering our journey toward deeper personal participation in the creation of our knowledge.

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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. All materials from U.K. contributors should first be sent to John Puddefoot. Manuscripts should be doublespaced type with notes at the end; writers are encouraged to employ simple citations within the text when possible. Use MLA or APA style. 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.

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POLANYI'S PROGRESS: TRANSCENDENCE, UNIVERSALITY, AND TELEOLOGY

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ABSTRACT Key words: progress, universals, teleology, traditions, Plato, Christianity, epistemology, metaphysics, ontology, realism, authority.

Michael Polanyi's work supports the idea of progress by linking progress to the transcendent, the universal, and the teleological. Polanyi's epistemology is developed in tandem with an implied metaphysics, one which incorporates a tripartite dialectic among the community, the individual, and the transcendent, universal reality which both community and individual progressively seek. Traditions, whether scientific or religious, may rightfully claim a penultimate authority. However, in science just as in religion, only the living God can possess ultimate authority. Hence, traditions may undergo progressive development by breaking out of their current understandings en route to greater understandings. In order to do so, the tradition must continually submit itself to the reality which it seeks to mediate to its members.

In all that he holds dear, whether in science, art, philosophy, or religion, Michael Polanyi's fundamental epistemology supports the currently beleaguered notion of progress. Polanyi's progress, which is entailed by tightly interwoven relations among transcendence, universality, and teleology, goes well beyond cumulative scientific advances to include virtually all the traditions of human endeavor. After a brief sketch of some historical and contemporary treatments of the idea of progress, the primary task of this paper will be to reexamine progress in Polanyi's work, especially his vision of progress for religious traditions.

I. SETTING THE SCENE: HISTORICAL AND CONTEMPORARY TREATMENTS OF THE IDEA

The idea of progress was a relatively late arrival in human history, not taking a firm and general hold until the Enlightenment. Among the ancient Greeks, the theory of world-cycles was commonplace and was subsequently passed on to the Romans. As J. B. Bury has pointed out, this cyclical theory, even when taken at its best, "meant an endless monotonous iteration, which was singularly unlikely to stimulate speculative interest in the future."¹ The cyclical position is typified by this statement of Marcus Aurelius:

The rational soul wanders round the whole world and through the encompassing void, and gazes into infinite time, and considers the periodic destructions and rebirths of the universe, and reflects that our posterity will see nothing new, and that our ancestors saw nothing greater than we have seen.²

This ancient pessimism regarding human affairs was peculiarly reinforced by the iron role of divine Providence in the Christian Middle Ages. Happiness, eternal happiness, was a generally desired object, but only in the life to come. The idea that one should be actively concerned with happiness in this world could hardly take root in the strongly eschatological atmosphere of the Middle Ages. This world was but a portal, either to one far greater for those elected to its enjoyment, or one greatly to be feared for its unending torments.

While some later Renaissance writers anticipate the idea of progress as part of the general transition from the medieval to the modern, the idea steadily develops from Fontenelle to Kant and Hegel, becoming almost a commonplace of the nineteenth century thinking in Europe and especially, the United States. The bitter experience of World War I strongly challenged the idea, particularly in theology, where Pauline doctrines of original sin were reinigorated by Karl Barth. Nonetheless, the idea of progress continued to find various historical expressions, not just in theology, but also in the ideological episodes of communism and fascism, as well as the continuing variations of Western democracies with all their traditions.

In the aftermath of the global break-up of communism, Francis Fukuyama has raised again the controversy about progress. Fukuyama asks “whether there is such a thing as progress, and whether we can construct a coherent and directional Universal History of mankind [sic].”³ Fukuyama defines Universal History as “an attempt to find a meaningful pattern in the overall development of human societies generally” (55) and contends for “a meaningful larger pattern in human evolution” (128).⁴ Fukuyama’s analysis, which ranges from Plato to contemporary events, is centrally concerned with *thymos*, which can be variously understood as the spirited or honor seeking part of the soul (Plato), the desire for recognition, honor, and mastery (Hegel), or *amour-propre* (Rousseau). In any case, *thymos* is to be distinguished from the merely appetitive drives on the one hand and rational thought on the other.

Christopher Lasch has also extensively criticized the idea (or as Lasch would prefer, ideology) of progress as it has entered into the Anglo-American discussion since the times of the American Revolution. For all their differences, Lasch and Fukuyama share the conviction that the lack of the thymotic is thoroughly debilitating. Commenting upon a debate between L. T. Hobhouse and William James, Lasch outlines two rival assessments:

For Hobhouse, the victory of the Enlightenment was precarious and the danger of a relapse into barbarism always imminent. For James, on the other hand, the victory of the Enlightenment was so complete that it had almost eradicated the capacity for ardor, devotion, and joyous action. . . . Accordingly he told Hobhouse, ‘Your bogey is superstition; my bogey is dessication.’ The whole question of progress comes down to the the accuracy of these rival readings of the signs of the times.⁵

Tracing the dessicating influences of the appetitive, Lasch observes: “The modern conception of progress depends on a positive assessment of the proliferation of wants.”⁶ Lasch takes his readers through developmental twists and turns (about what constitutes progress) which end up in our current societal mess of consumerism, shopping malls, and “wage slavery.”⁷ Not unlike Fukuyama in this one respect, Lasch protests against the excessive multiplication of desires as a moral evil which is ultimately self-destructive.

According to Lasch, when progress is conceived as the appetitive pursuits of “unlimited economic growth and acquisitive individualism,” a disconnectedness to the past is concomitantly fostered. This deracinated, a-traditional mode of thought tends either to romanticize and thus cheapen the past or to suffer from a kind of community amnesia. In the rush to fulfill secularized desires, “to maintain our riotous standard of living,”

this disconnected, deracinated viewpoint tends to flatten out all ethnic, familial and religious traditions in the name of a colorless universalism.⁸ As a result, the past does not actively enter into the present through the communal embodiment of a tradition.

Lasch's critique is effective against certain parts of the Liberal tradition, particularly the comfortable, bourgeois aspects of modernity which have resulted from the suppression of the thymotic (as Hobbes and Locke advocated and as Nietzsche opposed), and the encouragement of the appetitive.⁹ Yet anyone familiar with Polanyi's writings will recognize that Lasch's main targets are not part of Polanyi's project.

First, Polanyi advocates, as the body of this paper will argue below, a much more profound sense of progress than that which Lasch has successfully criticized. Second, Polanyi's entire epistemology, his "personal knowledge," is largely based upon the *passionate* participation of the discoverer and knower. Where the Enlightenment eventually gave rise to certain dessicating tendencies, and none could be more so than the logical positivism against which Polanyi did combat, Polanyi not only afforded a place for the knower, he even saw that the passion of the knower had a critical role, particularly in the breaking through to new insights or paradigms (See, for example, "Intellectual Passions," in *PK* 132-202). Very much like Fukuyama's rechanneling of the thymotic, and Lasch's "capacity for ardor, devotion, and joyous action," Polanyi explicates heuristic passion as one of the key requirements for discoveries which advance knowledge, i.e., progress. Third, Polanyi agrees with Lasch on the necessity of community and tradition. Indeed, Polanyi's own understanding of progress is unthinkable without the role of traditions. After all, without an ongoing community, a tradition, any new discovery could not outlive the lifespan of the individual discoverer. Going beyond Lasch and Fukuyama, Polanyi offers hopeful suggestions for how traditions might be re-oriented and renewed by linking the passionate (= thymotic) with the intelligent in pursuit of the transcendent reality which traditions attempt to embody and mediate.

II. HOW POLANYI'S BASIC THEMES ENTAIL PROGRESS

THE DIFFICULTY AND IMPORTANCE OF ASSESSING NOBLE CONCEPTS

The more depth of meaning we associate with progress, the more difficult it is to define or measure progress adequately. But then again, how would one go about measuring beauty? Or goodness? Or truth? The nobility of the quality or being under investigation may preclude any sort of empirical measurement. So Socrates begs off giving an account of the Good itself, but is willing to attempt an account of what is the "offspring of the Good, and most like it."¹⁰ Recognizing the transcendent nobility of his object, the Good, Plato's Socrates wisely adopts the method of indirection; yet in doing so he renders the famous analogies of the sun, the line, and the cave, analogies which have been heuristic aids for many, and minimally, a stimulating source of discussion, ever since. The Socratic analogies not only refer to the transcendent, they also encourage participation in the transcendent by relating its indefinable nobility to our present estate. Normal accounts of abnormally lofty subjects will not suffice; yet in historically successful accounts such as the Republic, the one who communicates stands before the eminent subject and there derives the inspiration to go forward with the account in spite of the inherent difficulties.

By directing our passions toward the transcendent, Polanyi's work encourages us to go forward. Thus he insists: "Science exists only to the extent to which there lives a passion for its beauty, a beauty which is believed to be universal and eternal" (*PK* 267). Here Polanyi does not differ from Plato so much in what they believed, but in how the beautiful, true, or good might be approached and transmitted. One important difference is that Polanyi does not share Plato's cyclical view of history.¹¹ Hence, for Polanyi, history is potentially far more valuable. In an extended sense, we who now participate in this discussion are the descendants of the tradition, *mutatis mutandis*, in which Plato and Aristotle lived and worked. So while Plato and Polanyi may both want us to believe that beauty is "universal and eternal," Polanyi has a great deal more to say about how traditions mediate such beauty, truth, and goodness. This, I think, is why Polanyi speaks *both* about contact with a reality external to us (much as Plato does) and also about our "self-set standards" (which Plato does not do) (*PK* 174). So just after Polanyi tells us about a "universal and eternal" beauty he wants us to believe in, he also says:

Yet we also know that our own sense of this beauty is uncertain, its full appreciation being limited to a handful of adepts, and its transmission to posterity insecure. Beliefs held by so few and so precariously are not indubitable in any empirical sense. Our basic beliefs are indubitable only in the sense that we believe them to be so. Otherwise, they are not even beliefs, but somebody's states of mind (*PK* 267).

Polanyi's progress involves a dialectic: ultimately derived from contact and relationship with the lofty and the noble--the beautiful, true, and good--progress must be historically mediated and arbitrated by the "self-set standards" of the traditions in science, philosophy, and religion. While "truth lies in the achievement of a contact with reality" (*PK* 147), discrepancies occasionally arise between the self-set standards of a given community and what its most advanced members understand. Commenting on the dispute between the Ptolemaic and Copernican views, Polanyi cites a study which states that "there were 2330 works published on astronomy between 1543 and 1887 . . . , of those, only 180 were Copernican" (*PK* 147, n.2). In this case the self-set standards of the tradition obstructed progress in the short term. However, without such standards, progress over time is impossible.

Two gaps must be crossed in Polanyi's account of progress. First, there is the logical gap separating a discoverer from the solution: "'Illumination' then is the leap by which the logical gap is crossed. It is the plunge by which we gain a foothold at another shore of reality" (*PK* 123). Second, there is the gap between a community's current understanding and that which the discoverer claims to have found:

To the extent to which a discoverer has committed himself to a new vision of reality, he has separated himself from others who still think on the old lines. His persuasive passion spurs him now to cross this gap by converting everybody to his way of seeing things, even as his heuristic passion has spurred him to cross the heuristic gap which separated him from discovery (*PK* 150).¹²

Here again, passion motivates the discovery of new reality as well as the duty to persuade the community to adjust its "self-set standards" to what has been discovered.

THE FRUITFUL IS DERIVED FROM THE TRUE, NOT THE REVERSE

When there are competing claims to truth, Polanyi fully recognizes the difficulty of assessing them, but he vigorously (and humorously) denies that the issue can be decided in advance by what he called “pragmatic criteria”:

You cannot define the indeterminate veridical powers of truth in terms of fruitfulness, unless “fruitful” is itself qualified in terms of the definiendum. The Ptolemaic system was a fruitful source of *error* for one thousand years; astrology has been a fruitful source of *income* to astrologers for two thousand five hundred years; Marxism is today a fruitful source of *power* for the rulers of one third of mankind. When we say that Copernicanism was fruitful, we mean that it was a fruitful source of *truth*, and we cannot distinguish its kind of fruitfulness from that of the Ptolemaic system, or of astrology, or Marxism, except by such a qualification (*PK* 147).

What makes a tradition, a hypothesis, or a scripture authentic (and eventually fruitful) for Polanyi is truth. What makes all knowledge exciting for Polanyi is his conviction that such truth exists, even though no one individual or community has complete articulate control over such truth. Quite to the contrary, authentic communities of inquirers must continuously *submit* to the truth which transcends the community.

METAPHYSICAL BELIEF

Herein lies the first prerequisite to Polanyi’s notion of progress--*belief* in a preexistent truth. “Any effort made to understand something must be sustained by the belief that there is something there that can be understood” (*SFS* 44). Speaking of the pioneers of modern physics and also applying the insight to artistic innovations, Polanyi writes: “They undertook to revise the current standards of scientific merit in the light of more fundamental intellectual standards, which they assumed to be *pre-existing* and universally compelling” (*PK* 302, emphasis added).

The ontological sense of Polanyi’s occasional references to “pre-existing” reality are bolstered by what typically takes place *after* a new “contact with reality” is made; for proportionate to its originality, each new discovery eventually gives rise to unanticipated further benefits and discoveries:

The most daring feats of originality are still subject to this law: they must be performed on the assumption that they originate nothing, but merely reveal what is there. And their triumph confirms this assumption, for what has been found bears the mark of reality in being pregnant with yet unforeseeable implications (*PK* 130).

Polanyi is consistently emphatic on the function of “metaphysical belief” in both pre- and post-discovery. So while addressing the problem of universals in general, he asserts:

But it is still the course of scientific inquiry in which the metaphysical conception of a reality beyond our tangible experience is written out most clearly, for all to see. From its very start, the inquiry assumes, and must assume, that there is something there to be discovered. The fascination, by which alone the inquiry can make progress, is fixed on discerning what it is that is there, and when discovery is achieved, it comes to us accredited by our conviction that its object was there all along, unrecognized. The rise, the path, the end, all point at the same reality and cannot but tell of it. Swearing by the existence of this reality, the scientist imposes on himself the discipline of his vocation. And his sense of approaching nearer to reality is not exhausted by the consummation of discovery. It persists in the belief that what he has discovered is real, and being real, will yet mark its presence by an unlimited range of unsuspected implications (*KB* 172).

“Swearing by the existence of this reality,” both before and after the moment of discovery, constitutes the external, impersonal, ontological ingredient of “personal knowledge.”

It is no small part of Polanyi’s genius, and undoubtedly why so many theologians find his work attractive, that he could see that *fides quaerens intellectum* (faith seeking understanding) applies to science as well as religion; indeed, that it applies to all intellectual endeavor. For Polanyi science, philosophy, and religion are interconnected; they are all likely to benefit from the “renewal of interest in the universe as one comprehensive whole” (*SFS* 27). Polanyi is teaching us to believe not just in ourselves, but in the “mutual correlation” between our highest standards and the impersonal, external pole, i.e., the reality toward which we direct our standards. Without the ontological target, “personal knowledge” is no more than ambitious subjectivism.

Absolutely essential to Polanyi’s notion of progress (and even to his entire project) is that whatever the specific discipline, the discoverer must be a “believer in transcendent reality,” a “metaphysical believer” (*SFS* 81; *KB* 172). While one or even a whole isolated group of scientists or philosophers might reject the reality of the referent of such “metaphysical belief,” their successful efforts are parasitic upon it. If enough of the leaders of a civilization yield to skepticism in such matters, the end result will be a philosophical nihilism with catastrophic results such as the twentieth century has in fact witnessed. Polanyi is certainly not advocating a system of specific metaphysical beliefs worked out by some a priori, rationalistic scheme. He is only insisting *that* there is a metaphysics upon which and before which all seekers of truth must stand. Thus the “believer in transcendent reality,” the “metaphysical believer,” and the theologian may all adopt Anselm’s *fides quaerens intellectum*. While this methodological faith does not contribute any new specific discoveries, it is the life-giving atmosphere for discoveries within an on-going tradition.

DEFINING THE REAL

Working within such an atmosphere, Polanyi defines the true and the real:

To hold a natural law to be true is to believe that its presence will manifest itself in an indeterminate range of yet unknown and perhaps unthinkable consequences. It is to regard the law as a real feature of nature which, as such, exists beyond our control.

We meet here with a new definition of reality. Real is that which is expected to reveal itself indeterminately in the future. Hence an explicit statement can bear on reality only by virtue of the tacit coefficient associated with it. This conception of reality and of the tacit knowing of reality underlies all my writings (*SFS* 10).

From the above we can gather that claiming something to be true involves:

1. Belief in the presence of the law or principle which may potentially be manifested to other minds before or after us.
2. The existence of the law or principle is an objective feature which is “beyond our control” but not beyond our potential discovery and understanding. This distinction constitutes an important part of Polanyi’s personal knowledge.
3. Caution as well as confidence is in order; for while the present discoverer may see something, future investigators may see far more in the same phenomena, i.e., the tacit coefficient may lead to a further mining of the law or concept, and our incipient notions may be corrected.

OBJECTIVE PRINCIPLE AND PERSONAL TRANSCENDENCE : COMMITMENT TO THE UNIVERSAL

Polanyi distinguishes the personal from the subjective by linking it to the objective:

I think we may distinguish between the personal in us, which actively enters into our commitments, and our subjective states, in which we merely endure our feelings. This distinction establishes the conception of the *personal*, which is neither subjective nor objective. In so far as the personal submits to requirements acknowledged by itself as independent of itself, it is not subjective; but in so far as it is an action guided by individual passions, it is not objective either. It transcends the disjunction between subjective and objective (*PK* 300).

The personal gains its transcendence (and thus its value) over the subjective/objective distinction by its commitment to the universality of the principles which it understands (see *PK* 308). What is understood is impersonal, but the one who understands the impersonal and contends for its universality can only do so personally. Progressive understanding of universal principles gives seriousness and power to the person (and community of persons). For example, we now take the Copernican theory far more seriously than we take the Ptolemaic; we take modern surgical theory and practice more seriously than we take the long-forgotten theory and practice of bleeding patients. As a result of our progressive understanding from Ptolemy to Copernicus (and beyond), space travel is now part of human experience. As a result of the progressive understanding of medicine, we now live longer. In this sense, progressive understanding of objective principles makes a person or a community more *realistic*. Hence, Polanyi’s repeated references to “contact with reality” and pointedly, his expressed hope “to increase ever further our hold on reality” (*PK* 403, *passim*). My point is that these contacts make *us* more real. So whether we are speaking of a tradition or of a person within that tradition, greater realization of reality constitutes progress—progress based upon belief in universal principles which might be discovered and must be upheld with universal intent.

Where contact with reality makes one more real, conversely, ignoring or denying these contacts will lead to unreality and inevitable pain, whether considered individually or communally. Even worse, according to Polanyi’s thinking, is the denial that there is such a reality. The denial of transcendent reality, what Polanyi characterizes as metaphysical nihilism (*SFS* 82), is a philosophical foe which Polanyi feels must be combated. Classically, it is the position of Thrasymachus to Socrates in Book I of Plato’s *Republic*; closer to home, it is the illusory objectivism against which Polanyi’s work contended. The issue involves the commitment to, or denial of, universals; and Polanyi’s work does commit him to uphold, at least in some form, such universals. As Harry

Prosch recently wrote about Polanyi:

I must confess that I always found it hard to make sense of his notion of the “progress” he claimed had occurred historically in ethics, law, art, religion, and mathematics, if there were nothing (at least nothing even dimly seen, like Plato’s Ideas) by which to assess whether the changes taking place in them were improvements or not.¹³

Polanyi was clearer than most writers about his position on the existence of universals; and in making that position explicit, he characteristically stepped into the midst of one of philosophy’s most venerable disputes.¹⁴ Also characteristically, he may have developed one of the most creative solutions to the problem through “the powers of tacit integration” (*KB* 165). Historically, there are four main types of response to the question of universals:

1. Extreme nominalism held that the only universal was the name, the word.
2. Conceptualism, often called moderate nominalism, held that there were universals in the mind, the general concepts, but that there was nothing corresponding to them in reality.
3. Moderate realism held that what was meant by the general concept was to be found in things, though not as it was in the abstract and in general, but as a concrete particular.
4. Extreme realism held that there was a structure of reality which corresponded exactly to the concept.¹⁵

A fifth, more recent response, is that the problem of universals is a pseudo-problem, one about which we need not trouble ourselves.

However, Polanyi thinks that the problem is quite important and that we should trouble ourselves about it. He correctly senses that much of what his work is doing directly involves this issue; for the solution is accomplished by the function of the tacit powers of the mind. Thus he contends: “To understand verbal communication requires . . . that we resolve the problem of universals: we must explain how a single word can apply to an aggregate of objects that differ in every particular”; and he then offers the same explanation for the “Nature of Meaning” (*KB* 190ff.). It is a beautiful thing to observe Polanyi enter this ancient fray with such confidence, precisely because the perennially evasive solution has to do with what Polanyi has consistently been contending. He thus frames the issue:

Kant wrote of the process of subsuming particular instances under a general term that it was ‘a skill so deeply hidden in the human soul that we shall hardly guess the secret that Nature here employs’. The secret was indeed inaccessible so long as one looked for an *explicit procedure* to account for the subsumption of particulars under a general term, but the secret can be found in a tacit operation of the mind. Take as our paradigm the viewing of stereoscopic pictures. There is a slight but decisive difference between each pair of corresponding particulars in the two pictures and, viewing these jointly, these disparities are fused to a single image possessing a novel quality. No explicit procedure can produce this integration (*KB* 191).

To the standard objection about universals, i.e., that apart from the particulars, universals are at best vague and at worst empty, Polanyi happily responds: Of course! For this objection amounts to the impossible demand that the tacit be identified with the explicit. Polanyi hardly thinks that *what* the tacit integrates is really empty, or that it is merely a conceptualist variation of the nominalist position. Polanyi indicates that he is well aware of the historical options from the realism of Plato, to the nominalism of Roscelinus (*KB* 165-66), to Wittgenstein’s more recent attempt to limit the problem to a function of language use in a “form of life” (*PK* 114).

Polanyi's criticism of Wittgenstein is particularly revealing: disagreements on the nature of things cannot be expressed as disagreements about the existing use of words. . . . The purpose of the philosophic pretence of being merely concerned with grammar is to contemplate and analyse reality, while denying the act of doing so (*PK* 114).

Deeply suspicious of Wittgenstein's use of "language game," Polanyi boldly advocates a realist position: I suggest that we should be more frank in facing our situation and acknowledge our own faculties for recognizing *real entities*, the designations of which form a rational vocabulary (*PK* 114, emphasis added).¹⁶

Polanyi then explains how the descriptions of such "real entities" work or fail to work according to the rational criteria used in forming class concepts. Indeed, Polanyi defines universals as "the joint meaning of things forming a class. This meaning is something real, . . . it is capable of yet manifesting itself indefinitely in the future" (*KB* 170).

Much like Aristotle's account in *Posterior Analytics* II.19, Polanyi observes that the problem of forming universals is a problem of empirical induction. Against those who would limit the problem of universals to analysis of language, Polanyi counters that "animals readily identify members of a class, though they have no language" (*KB* 166).

Quite in keeping with the overall movement of his thought, Polanyi applies the problem of universals to the "analysis of the mind":

as we move to a deeper, more comprehensive, understanding of a human being, we tend to pass from more tangible particulars to increasingly intangible entities: to entities which are (partly for this reason) more real: more real, that is, in terms of my definition of reality, as likely to show up in a wider range of indefinite future manifestations (*KB* 168).

Once again Polanyi indicates that he is fully conscious of the philosophical controversy which he is engaging:

But am I not in fact disposing of an enigma by postulating a miracle? Not altogether. I am interpreting the formation of class concepts (along with the discovery of natural laws) as based ultimately on a process of tacit knowing, the operations of which I have exemplified in the learning of skills, the recognition of physiognomies, the mastery of tests, the use of tools, the uttering of speech, and the act of visual perception. The powers of integration which achieve these acts have the same structure throughout (*KB* 167).

The indeterminate aspect of universals can be known tacitly, where "we know more than we can tell" (*KB* 172); but in the future, we may also be able to tell more about a given universal, because a move in the right direction often spawns even better moves by those who follow.

Without "universal intent" the personal would collapse into the subjective. If there were no universal reality toward which we pointed with universal intent, then the collapse is merely postponed, not averted. Polanyi's daring epistemology would revert to an epistemology about epistemology, not an epistemology about an implied metaphysical reality. Then one could remove, ignore, or deny all those embarrassing writings about ontology and "contact with reality." That might make Polanyi a bit more acceptable to many of our contemporaries, but it would also remove the generative power of his basic conception. As I read Polanyi, he never flinched on this issue; in fact, that is one of the reasons why I like to read Polanyi. Without the universal toward which we aim with universal intent, Thrasymachus wins. Progress then means whatever the ruling party or religious authority declares it to be. Meaning collapses into unprotected specificity, unprotected, that is, by the larger meaning in which it may participate.

Generality is indeed but an aspect of profundity in science, and profundity itself, . . . but an intimation that we are making a new, more extensive contact with reality (*PK* 137).

Progress is a natural possibility within Polanyi's thought. It is entailed in the idea of universal principles which may be progressively discovered by a community of explorers as they succeed in transcending the arbitrary through submission to the reality they would discover. Once again, Polanyi never specifies any systematic, a priori aspects of the ontology which he implies. He only insists *that* there is such a reality to which we may and should aspire.

III. TELEOLOGY

The interconnected bases of Polanyi's work not only imply progress, these interconnections also imply a teleology. True to form, Polanyi tells us that

the world cannot be thought of as *ultimately* meaningful unless the organization of its parts is meaningful, that is, unless there is some point to the way things are put together or, at least, to the direction in which they are developing (*M* 161).

Furthermore, the meaningful nature of the ensemble indicates that "the universe, per se, is not 'value-free.' Some intelligible directional lines must be thought to be operative in it" (*ibid.*).

Polanyi points out that orderly relations among the parts of the universe are always assumed, explicitly or implicitly. What leads some to the conclusion that the world is absurd is the supposition "that there is no point to what transpires in it, i.e., that there is no end or aim or purpose to the whole business" (*M* 161-62). Once the *telos* of the whole has been denied, then only emotivist, subjective meaning remains for humanity. By contrast, Polanyi's commitment to a meaningful whole, his teleology, houses his commitment to progress. While there are myriad mundane instances of tacit integration, significant progress also takes place as integrating movement toward the whole. Hence the great weight on universal intent, since a move in the right direction, upheld to the community with universal intent, will often have unanticipated beneficial results (See, for example, *PK* 310). So Polanyi argues: "Even the most elaborate objectivist nomenclature cannot conceal the teleological character of learning and the normative intention of its study" (*PK* 371-72).

Polanyi's holistic vision would be unthinkable without some sort of teleology. So it is no surprise that he contends for the "network of mutual penetrations" (*PK* 284) among the various disciplines, including religion, and as we saw above, applauds "the renewal of interest in the universe as one comprehensive whole" (*SFS* 27). Tellingly, he attributes the opposition of science and religion in his day more to the rejection of teleology than to any other intellectual factor (*M* 162).¹⁷ In fact, Polanyi contends that unlike inanimate things, "living beings . . . can be understood only in teleological terms" (*PK* 175).

While Polanyi is generally careful about his teleological claims, he does make some very suggestive remarks at key junctures. Part Three of *Personal Knowledge* concludes with a rather free application of the Christian doctrine of Fall and Redemption to several of Polanyi's most important themes. Taking a considerable degree of metaphorical license, he equates the condition of Fallen Man

to the historically given and subjective condition of our mind, from which we may be saved by the grace of the spirit. The technique of our redemption is to lose ourselves in the performance of an obligation which we accept, in spite of its appearing on reflection impossible of achievement. We undertake the task of attaining the universal in spite of our admitted infirmity, which should render the task hopeless, because we hope to be visited by powers for which we cannot

account in terms of our specifiable capabilities (PK 324).

This passage is remarkable in the weight which it places upon “attaining the universal” as well as Polanyi’s claim that the great predicament, our fallen state, is that we are not sufficiently equipped on our own to attain the universal. In speaking of the “grace of the spirit” in powers that may visit us and empower us to achieve the universal, Polanyi has attributed some sort of active power to the transcendent reality believed in (Cf. “the believer in transcendent reality” and “the metaphysical believer” (SFS 81)).

As such, the very responsibility, the calling of being human, is at stake in the human response to the whole:

Our subjective condition may be taken to include the historical setting in which we have grown up. We accept these as the assignment of our particular problem. *Our personhood is assured* by our simultaneous contact with *universal aspirations* which place us in a *transcendent perspective* (PK 324, emphases added).

The meaning of human personhood is thus secured by the transcendent activity of universal intent. Such personhood does not ignore or devalue historical and subjective conditionedness. Rather, this notion of personhood links the particulars to the universal.¹⁸

Yet it seems to me that Polanyi, particularly in his remarks about Fall and Redemption, has gone even further. He appears to have advocated something like a magnetism between the human mind rightly placed on the trail of truth and furthermore oriented toward the universal, and reality itself, whether universal principles of science or the universal God of the Christian religion. The tantalizing implication is that human minds which are moving in the right direction are somehow aided by a magnetic attraction between the original endowment of the human mind and the reality it seeks to know. Herein lies the fiduciary component of Polanyi’s work: even though we will never possess justification for them by algorithmically strict rules, we must in good faith uphold our knowledge and convictions with universal intent. For Polanyi, upholding the universal is not irrational; it is more than rational. It includes all the rational power one can muster, but it also requires the faith to proceed into an unknown area and good judgment to succeed once there.

In introducing the concept of a heuristic field, Polanyi reiterates that the universe is already ordered for our minds and is somehow aiding our minds in progressive understanding:

We assume that the gradient of a discovery, measured by the nearness of discovery prompts the mind towards it. . . . It [the heuristic field] suggests that we may do so because an innate affinity for making contact with reality moves our thoughts--under the guidance of useful clues and plausible rules--to increase ever further our hold on reality (PK 403).

Yet he is careful to avoid implying that the mind’s movement is somehow passive:

The lines of force in an heuristic field should stand for *an access to an opportunity, and for the obligation and for the resolve to make good this opportunity, in spite of its inherent uncertainties* (ibid.).

Human freedom is at work here. We have the opportunity and the responsibility to accept or reject the *telos* given to us, the universal possibilities latent within the particularities of our historical givens. By so putting it, Polanyi implies that the pursuit of knowledge is morally charged; for if we fail to uphold the independence of the reality we would discover, then skepticism and nihilism are the probable if not inevitable result. We must show a “preference for truth even at the expense of losing in force of argument. Nobody can practice this unless he believes that truth exists” (SFS 70).

While Polanyi's thought involves a unique kind of realism, he takes pains to distance himself from the rationally-based eighteenth century universalism. He himself specifies three ways in which his thinking differs from such Enlightenment thought. First, he frankly accepts "the impossibility . . . of verifying any of the universal statements commonly held by men. This precipitates the crisis caused by sceptical empiricism and vastly extends its scope." Second, he recognizes that "eternal truths" are not automatically held by people; the twentieth century has demonstrated all too well that such truth can be denied. Instead, he contends that "an explicit profession of faith" is required to uphold them. Third, he argues that each of us can begin intellectual development only by "accepting uncritically a large number of traditional premisses," and that our particular development will remain tethered (to greater or lesser extent) to the tradition from which we began. Where the Enlightenment period tended to devalue tradition, Polanyi sees tradition as "the true and indispensable foundation" even for the rationalist ideals of that age (*SFS* 82-83). Finally, unlike the trend of the Enlightenment, Polanyi does not want to eliminate the thymotic; instead, he would harness the passionate to the intelligent quest for the universal.

IV. TRADITIONS AND PROGRESS

In Polanyi's thought, any notion of progress without a tradition is simply incoherent. At its best, a tradition functions as both a transmitter of knowledge and the locus from which fresh attempts to expand knowledge may take place. Furthermore, a community, as the present manifestation of an ongoing tradition, will act as the practical (but not ultimate) arbiter of new claims of truth through the judgment of its recognized experts. From Plato's cave to Polanyi's "dwelling in and breaking out," the one who discovers something new, who makes a new "contact with reality," must report it to the community, where perhaps, it may become part of the ongoing tradition as the community is perpetuated through time. Indeed, this reporting back is a moral ingredient of new knowledge. It is incumbent upon all individuals who have received so much from the community of their indwelling to attempt to persuade the community of the truth of the alleged new vision. Nonetheless, the community is not always happy about what its most original members have to say. After all, Socrates drinks hemlock, and Jesus dies on a cross between two thieves.

A community may resist new truth, but human endeavor is still rooted within the community. "Thus to accord validity to science--or to any other of the great domains of the mind--is to express a faith which can only be upheld within a community" (*SFS* 73). As Charles McCoy has put it:

The context of meaning within which our earliest memories are set is cultural. It is meaning that belongs to the community before we arrive on the scene. We receive and respond to patterns existing before our appearance. Gradually we are inducted into this community of interpretation, take our place within its relationships and interactions, and participate in revising its interpretations and passing them to subsequent arrivals.¹⁹

Polanyi adds that while children must accept the authority of parents and teachers in order to embark on the intellectual life, as children grow a process takes place wherein students begin to make their own contacts with the "reality of nature" (*SFS* 45). Hence there is a gradual transfer of authority, from the standards of a community to the standard of reality in science, and I would hope, from parents and teachers who gave us our first notions to the living God in religion. In this transfer of authority, the community does not disappear; in fact, the community which eventually accepts new truth, unwelcome though it may have been when first presented, normally outlives the individual who originally discovered and presented such truth. As the community adopts such truth as its

own, the once new truth becomes part of the tradition; and as this occurs, the tradition recaptures its authority. Hence there is a tripartite dialectic among the community, the individual, and the ontological.

RELIGIOUS TRADITIONS AND PROGRESS

Examining the shortcomings and the possibilities of religious traditions, Vincent Colapietro also suggests that progress is dependent upon something beyond the tradition itself:

As a set of answers, religious traditions by themselves do not stand on their own; their deficiencies, lacunae, and errors call out for revision, development and correction.²⁰

Painfully aware that our traditions' failures are of the present as well as the past, he points out the complexity of the problem:

Our religious traditions are, to some degree and in some ways (however subtle), inauthentic. Hence, it becomes imperative to adopt a critical stance toward the inherited framework in which we customarily dwell. But (and here the issue becomes more complex than we ordinarily suppose) the possibility of adopting such a stance depends, in part, upon the vitality of the very tradition or framework about which judgments of authenticity are being made (Colapietro, 33).

Borrowing a point from Bernard Lonergan, Colapietro notes that dialectic is characterized by *agon* (competition or conflict) and that this conflict, which in intellectual and religious endeavors may take place between community and individual, is potentially destructive. In regards to the community, "what should be controlling in any inquiry is a question or set of questions, not a text or body of writings" (Colapietro, 36). Indeed, he adapts the suggestion of Robert Wuthnow and Edith Wyschogrod "that it would be better to conceive of religious traditions in terms of questions than of answers" (Colapietro, 30). On the other hand, questioning is not the final word:

If one asserts that nothing is, in reality, beyond the possibility of being called into question, then one is, in effect, taking the very act of questioning to be unquestionable. The (unquestioned?) primacy of the interrogative mood is, as Edith Wyschogrod suggests, the characteristic mood of our postmodern day (Colapietro, 39-40).

While a tradition's "openness to innovation" and its willingness to call itself into question in ever more profound and radical ways are praiseworthy, questioning alone is an inadequate arbiter of authenticity. Questioning the ultimacy of questioning, Colapietro contends:

For the willingness and, indeed, the capacity to pose questions of an ever wider scope and deeper significance depends on an unquestionable *fidelity to the ideals* animating or inspiring our traditional practices (Colapietro, 39, emphasis added).

It is precisely this fidelity to a transcendent ideal which Polanyi sees as the source of a tradition's progress. Community leaders, be they papal authorities or Nobel Laureates, must submit themselves and their communities to the reality of that ideal. In fact, in a progressive community, one could not accede to religious or scientific authority without already having done so.

PENULTIMATE AND ULTIMATE

The ongoing progress of a tradition depends upon its continual interaction with the transcendent. In science, this would take the form of Polanyi's oft-repeated, "contact with reality"; in religion, as I would put it going beyond Polanyi, interaction with the living God.²¹

Polanyi develops a dialectic between the penultimate human authority and the transcendent, ultimate authority to which it refers:

Every thoughtful submission to authority is qualified by some, however slight, opposition to it. . . . When I speak of science I acknowledge both its tradition and its organized authority, and I deny that anyone who wholly rejects these can be said to be a scientist, or have any proper understanding and appreciation of science. . . . I accept the existing scientific opinion as a *competent* authority, but not as a *supreme* authority (*PK* 164).

The ubiquitous presence of the tacit dimension makes it impossible to hold authority indefinitely; for authority tends to be explicit, while the tacit leaves more to be said and unanticipated contacts to be made. When something new is said, real conversation may take place; or else, real conflict develops between the old way, backed by the penultimate authority of the community, and the alleged discovery of new truth.

In this manner, Polanyi's thought represents a challenge to the Christian traditions' use of canon. While there is a broad range of the use of canon within different Christian communities, the very notion that a body of writings could remain authoritative is antithetical to Polanyi's entire *Weltanschauung* and directly opposed to his views on progress. As traditional writings, even formative writings, religious writings of the past would play a vital role in Polanyi's thinking. As the final arbiter, as the measure of all future discoveries, the very idea of canon presents a head-on conflict with Polanyi's views. The problem is that there is no extra-canonical correction possible to canon; this Polanyi would disallow, for were a series of writings to be granted ultimate authority, the penultimate would be arrogating prerogatives of the ultimate. Rather than seeing canonical texts as authoritative, Polanyi placed the locus of final decision in the individual's conscience: "Conscience can then be used even to oppose the authority of the Bible where the Bible is found spiritually weak" (*SFS* 56). Throughout his writings, Polanyi is really quite consistent on this point: both the individual and the community of indwelling must remain in submission to the transcendent and spiritual, whether we are speaking of the universal laws of nature or the God whom Christians worship:

Processes of creative renewal always imply an appeal from a tradition as it *is* to a tradition as it *ought to be*. That is to a spiritual reality embodied in tradition and transcending it. It expresses a belief in this superior reality and offers devotion to its service (*SFS* 56-57).

A tradition cannot be guided from 'is' to 'ought', it cannot experience "processes of creative renewal" unless it successfully appeals to a transcendent "spiritual reality" which the tradition must continuously recognize as a "superior reality." The vitality of a tradition is a qualitative measure of how well it has made its appeal to this superior spiritual reality and how completely it has devoted itself to its service.

Characteristically, and in accord with his view that the universe should be seen "as one comprehensive whole," Polanyi thinks that

Christianity is a *progressive enterprise*. Our vastly enlarged perspectives of knowledge should open up *fresh vistas* of religious faith. . . . the greater precision and more conscious flexibility of modern thought, shown by the new physics and the logico-philosophic movements of our age, *may presently engender conceptual reforms* which will renew and clarify, on the grounds of modern extra-religious experience, man's relation to God. *An era of great religious discoveries*

may lie before us (PK 285, emphases added).

Seemingly, Polanyi is suggesting that the religious prophet of this age might use quarks, nebulae, or perhaps philosophical clarifications as a point of departure for stimulating religious thought and renewal. Progress, when it occurs, is the historical manifestation of interaction with the transcendent. As Christianity successfully and repeatedly interacts with the transcendent, with God, only then does it become a “progressive enterprise” whose “conceptual reforms” could lead on to “fresh vistas” and a great era of discovery.

Polanyi even takes the point of Christian worship and doctrine to be the stimulus of unending spiritual progress. Hence he takes the rather extreme view that, unlike other excellent frameworks of indwelling, Christianity is not to be enjoyed (*PK 198*). Instead, Polanyi sees a cultivated sense of tension, anguish, and movement brought on by the ritual of worship. Faith is seen more as a journey, a progressive quest, than as a fixed set of doctrines:

The moment a man were to claim that he had arrived and could now happily contemplate his own perfection, he would be thrown back into spiritual emptiness.

The indwelling of the Christian worshipper is therefore a continued attempt at breaking out, at casting off the condition of man, even while humbly acknowledging its inescapability. Such indwelling is fulfilled most completely when it increases this effort to the utmost. It resembles . . . the heuristic upsurge which strives to break through the accepted frameworks of thought, guided by the intimations of discoveries still beyond our horizon (*PK 198-99*).

Characterizing the indwelling of Christian worship as “a continued attempt at breaking out” essentially reiterates his definition of Christianity as a “progressive enterprise.” For without a vision of progress, breaking through accepted frameworks would be no more than intellectual or spiritual vandalism. Even though Polanyi challenges the finality of any particular framework and its human authorities, it must not be concluded that Polanyi is against authority; for all worthwhile endeavors are primordially nurtured by the recognized authorities in our communities of indwelling. Only after such a nurturing has taken place can there be a gradual transfer to the individual seekers/explorers who themselves must seek interaction with reality. In turn, these seekers are ethically beholden to report back any alleged gains for the consideration of the ongoing community. Yet the primary obligation of truth seekers is not to the community as it is, but to the ultimate reality which the community attempts to mediate; hence, to the community as it ought to be.

CONCLUSION

Polanyi positions both individual and community before the transcendent, where increasing “contact with reality” in science and worshipful interaction with God in religion provide the possibility of human progress. A key ingredient of this view is responsibility: the responsibility of the individual to the community of one’s indwelling (and even to all future communities); the responsibility of the scientist to what are believed to be universal principles; and the responsibility of the worshiper to God and other worshipers. The exercise of responsibility to the universal and the transcendent protects the individual and community from subjectivism and relativism:

In so far as they are acting responsibly, their personal participation in drawing their own conclusions is completely compensated for by the fact that they are submitting to the universal status of the hidden reality which they are trying to approach (*PK* 310).

Implied in all this is the persistent attitude of humility, an attitude which can only be sustained by recognizing our fiduciary roots in both science and religion, remembering our penultimate dependence on our traditions, and our ultimate dependence upon the transcendent.

On a time line where five million years (a current estimate of the longevity of humankind) is represented by fifty feet, the life of Jesus would be placed about one quarter of an inch from where we stand today. Seen in this perspective, even the most venerable traditions, such as Christianity, are still in their infancy.

Polanyi asks us to do two things: uphold the highest standards of our traditions and get used to submitting them again and again to the transcendent and universal reality which they mediate to us. Over the last four hundred years or so, the impressive successes of the scientific tradition have resulted from maintaining self-set standards while submitting those achieved standards to further exploration and revision. The hope which we might share with Polanyi is that all aspects of human life might likewise develop such progressive traditions.

Endnotes

1. J. B. Bury, *The Idea of Progress: An Inquiry into Its Origin and Growth* (New York: Dover Publications, Inc., 1955, an unabridged and unaltered republication of the 1932 edition), 12.
 2. *Meditations*, xi, I, as cited in Bury, 13.
 3. Francis Fukuyama, *The End of History and the Last Man* (New York: The Free Press, 1992). While Fukuyama's historical development of *thymos* is highly instructive, other aspects of his work are inadequately addressed or even seriously flawed. For example, while he notes the great importance of Kant's "Idea for a Universal History from a Cosmopolitan Point of View," he believes that Hegel actually wrote that history which Kant called for. True enough, except that Kant held to a *cosmopolitan*, i.e., *international* or more to the point, *universal*, understanding of history and nation life, while Hegel (at least as Fukuyama and many others of the right read him) encouraged the development of nationalism. My own view (which is indebted to Dr. Jeffrey Wattles of Kent State University for this insight) is that Kant was the more prophetic on this point. In fact, where much of Kant's essay is a call for such a history to be written and is itself a formal position, Kant is quite specific about this material point: there must be a *universal* government to begin to fulfill the telos of humankind. As we currently find ourselves in 1993, the limitations of nationalism are becoming increasingly evident while internationalism is certainly on the rise, its many problems and barriers notwithstanding.
- A second major flaw in Fukuyama's essay is his failure to see the thymotic element of religion. While he understands that Islamic fundamentalists are passionately driven, he fails to see the positive sense in which a religion held to be *universally valid* can provide the thymotic drive which is missing in the otherwise all-too-comfortable liberal democracies. Strong bonds join those who are dedicated Christians as well as Muslims. It is not too much to say that many millions from all ethnic and national groups would yield their lives if they thought it necessary to uphold the faith, and also are attempting to live their lives by their understanding of their faith. The

dedication of intelligent faith may in fact be the apotheosis of *thymos*, the end of thymotic history.

4. Fukuyama's position represents something like a linear, dialectical view of progress, and one which clearly opposes the cyclical view of the ancient Greeks and those of the Nietzsche-Foucault persuasion.

5. Christopher Lasch, *The True and Only Heaven: Progress and Its Critics* (New York and London: W.W. Norton & Co., 1991), 294-95.

6. *Ibid.*, 45.

7. *Ibid.*, 64, 66, 200-08, *passim*.

8. *Ibid.*, 22, 23.

9. The economic issues Lasch raises may end up being more complex than he would have us believe, particularly in the historical drama which is being played out in the formerly communist world. Furthermore, many Third World nations long for the very sort of development which Lasch has critiqued--"proliferation and distribution of material goods and services." While for the purposes of this paper, we can set aside the definition of progress involved with the mere proliferation and distribution of material goods and services, Fukuyama has shown that that definition actually has much to do with the history of the Western democracies, especially the United States.

10. Plato, *Republic*, trans. G.M.A. Grube (Indianapolis: Hackett Publishing, 1974), 506e.

11. The elimination of the cyclical view of history does not necessarily commit Polanyi to a linear/dialectic view. In her critical response to this paper which was originally delivered at the Polanyi Society Annual Meeting in Kansas City, in November, 1991, Diane Yaeger argues that Polanyi's views are essentially harmonious with Peter C. Hodgson's "post-Troeltschian retrieval of Hegel." See Hodgson, *God in History: Shapes of Freedom* (Nashville: Abingdon Press, 1989), 147.

I am indebted to Yaeger's many instructive criticisms for broadening the discussion and forcing me to likewise broaden my own awareness of the issues. However, I cannot share her enthusiastic embrace of Hodgson's work as a superior alternative to either cyclical history or linear development. Hodgson cannot allow history to be cyclical, for then it could not be the locus of Spirit and meaning, let alone be "co-constitutive with God" as he contends. On the other hand, Hodgson, like so many contemporary writers, does little more than scoff at linear notions of historical development. Furthermore, he wants to avoid the labyrinth image of Jacques Derrida and Mark C. Taylor. Hence he attempts to conjure up a "spiral" image as the solution, one in which meaningful shapes can be actualized in ethical action.

The problem with all this is that Hodgson's spirals are either going to be disconnected, pointilistic, and fundamentally a-traditional, or else, they are going to be connected through traditional mediation and memory. While there is no reason to rule out Hodgson's metaphorical spirals, his project is incoherent without some linearity. Polanyi's image of "dwelling in and breaking out" is a much richer and more persuasive account. It allows for discontinuities, even ruptures (perhaps even spirals!), but it also indicates a sense of progress which the tradition eventually carries forward through a linear/dialectic, at least in living traditions.

For his part, Fukuyama sees that there are repetitions of certain patterns of rise and fall in history:

Those who have watched the periodic rise and fall of certain great powers in antiquity and compared them to those of contemporary times, are not wrong in seeing similarities. But recurrence of certain long-standing historical patterns is compatible with a directional, dialectical history, as long as we understand that *there is memory and movement between repetitions* (Fukuyama, *The End of History*, 127, emphasis added).

Fukuyama is hardly the first historian to observe that there is both cyclical and linear movement. Thus Charles Perrault, when he was not writing fairy tales, addressed the question during the heady times of Louis the Great in France with a four part publication *Parallèle des Anciens et des Modernes* (1688-1696). Perrault, like many of his contemporaries, wanted to contend for the equality or even superiority of the late seventeenth century. The problem was that it was hard to maintain a progression of knowledge from classical antiquity to the seventeenth century. For while the seventeenth century may have been equal or superior to antiquity, it was clear to all that say, the tenth century A.D. was clearly inferior. Perrault answers:

There are breaches of continuity. The sciences and arts are like rivers, which flow for part of their course underground, and then, finding an opening, spring forth as abundant as when they plunged beneath the earth. Long wars, for instance, may force peoples to neglect studies and throw all their vigour into the more urgent needs of self-preservation; a period of ignorance may ensue; but with peace and felicity knowledge and inventions will begin again and make further advances. (Taken from Bury, *The Idea of Progress*, 85-86).

So while there is much to commend in Hodgson's work, he has either given us a juvenile typology (circle bad; line bad; spiral good), or, he has failed to see that his own commitments and preferences imply some sense of linear development in order to avoid the labyrinth (very bad) of Mark C. Taylor and Derrida.

12. Polanyi's use of 'illumination' to describe what happens in crossing a logical gap bears strong similarity to Plato's *nous* at the top of his divided line. Furthermore, Polanyi's account of the heuristic powers of persuading one's community of a new discovery is not terribly different than Plato's account of the prisoner released from the cave who returns with his new knowledge. Given the many points of convergence between Polanyi and Plato, I think it would be more helpful if students of Polanyi did less scoffing at "Platonism" or "Platonic foundationalism" and more careful study of how these two thinkers agree and differ. Consider, for example, where Polanyi compares his procedures to "out-dated Platonism" and then adds, "Yet it is precisely on this conception of objectivity that I wish to insist" (PK 6).

13. Harry Prosch, "Those Missing Objects," in *Tradition and Discovery* 17 (1990-91): 18.

14. For an excellent historical overview of the issue, see *The Problem of Universals*, edited with introductions by Andrew B. Schoedinger (New Jersey and London: Humanities Press, 1992).
15. Taken from Albert Keller, “Universals,” in *Encyclopedia of Theology: The Concise Sacramentum Mundi*, ed. Karl Rahner (New York: Crossroad, 1991), 1787-88.
16. The affirmation of “real entities” is generally considered to place one on the Platonic end of the realist spectrum. See, for example, Schoedinger’s introductory commentaries on Bertrand Russell and C. A. Baylis, as well as their selected contributions in *The Problem of Universals*, 114-19 and 182-90 respectively.
17. For an interesting account of the retreat of what might be called “biblical or Christian teleology,” see John Dillenberger, *Protestant Thought and Natural Science* (Doubleday and Co., 1960; reprint ed., Notre Dame, IN: University of Notre Dame Press, 1988). Dillenberger traces the history of conflicts between Church dogma, often derived from specific Biblical passages blended with Aristotelian metaphysics, and the advancing science. By contrast, Polanyi’s embrace of teleology does not commit him to specific a priori positions. He simply needs there to be a teleology, a meaning of the whole which ultimately guarantees the progressive movement of the parts. The specifics are to be discovered progressively within a tradition.
18. An important agreement with Lasch’s thesis is reached at this point. Summarizing the position of Orestes Brownson, Lasch declares: “Man grasps the universal only through the particular.” See *True and Only Heaven*, 194.
19. Charles McCoy, *When Gods Change: Hope for Theology* (Nashville: Abingdon, 1980), 99.
20. Vincent M. Colapietro, “The Critical Appropriation of Our Intellectual Tradition: Toward a Dialogue between Polanyi and Lonergan,” in *Tradition and Discovery* 17 (1990-91): 29. Hereafter, this article will be cited parenthetically within the text.
21. Polanyi’s writings on religion are often more suggestive than substantive. For a good critique of his religious views, see Terence Kennedy, C.S.S.R., *The Morality of Knowledge: Transcendence and the Intellectual Life in the Thought of Michael Polanyi*, Dissertatio ad Doctoratum in Theologia morali consequendum (Rome: Pontificia Universitas Lateranensis, 1979), 193-96.

continued from page 2

Although much contemporary scholarship is quickly moving to exploit electronic resources, it is also the case that the mere mention of electronic texts elicits from some academics exaggerated negative reactions. Undoubtedly, there are some such curmudgeonly souls affiliated with The Polanyi Society. Also it is clear that many folk interested in Polanyi do not have institutional access to the INTERNET system where our address is located. Rest assured: papers and other materials generated by The Polanyi Society programs will continue to be available in "hard" copy.

If you are interested in subscribing to the Polanyi "discussion list," here is how you do it. Write an e-mail message to **owner-polanyi@sbu.edu** asking to be added to the list; include your INTERNET or BITNET address. If you want to be deleted from the list or have special problems (such as a strange address), write to this address outlining your request. John Apczynski will eventually receive your requests and handle concerns personally, rather than through an automatic listserv function. To post items to the Polanyi list, you simply send your message to **polanyi@sbu.edu**. Any e-mail which you send to this address will automatically be forwarded to anyone who has subscribed to the list.

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Andy F. Sanders
Michael Polanyi's Post-Critical Epistemology
A Reconstruction of Some Aspects of 'Tacit Knowing'

Amsterdam 1988.298 pp. ISBN: 90-5163-072
US-\$25.-/112.50

The aim of this book is to give a reconstruction of the main elements in Polanyi's postmodern and naturalized epistemology. Chapters 1-4 are concerned with the characteristics of 'tacit knowing', and Polanyi's use of concepts like 'assertion', 'belief', 'truth' and 'reality'. Drawing on J.R. Searle's recent theory of intentionality, the 'tacit' component of assertive utterances is analysed in terms of intentional states. It is argued that Polanyi does not use a subjective notion of truth, and that his partial analysis of 'true' can be regarded as a special version of the non-descriptive theory of truth. His metaphysical realism is discussed, and his approach in the philosophy of science and that of Lakatos are compared. In the chapters 5-6, the Popperian critique that the theory of personal knowledge is subjectivist and psychologist, is deconstructed. It is argued that Polanyi leaves the objectivity of knowledge intact, and that his epistemology is preferable to the Popperian conception of knowledge 'without a knowing subject'. In chapter 7 the later extension of the theory of tacit knowing into the realm of the humanities, especially that of religion, is touched upon and some suggestions are offered for its relevance in the field of philosophy of religion.

