

PERSONAL KNOWLEDGE TRANSFORMED: JAMES LODER'S NEO-CHALCEDONIAN SCIENCE OF PRACTICAL THEOLOGY



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ABSTRACT

Practical theologian James E. Loder engaged in a sustained 40+ year conversation with some of the most significant figures in science in the 20th century to construct a neo-Chalcedonian practical theology with enormous implications for both the science-theology dialogue and for the Church's witness to the Gospel in a scientific world. This essay focuses primarily on how Loder engaged and appropriated the post-critical epistemology of Michael Polanyi for his own critical and constructive proposals for use in the theology-science dialogue. Loder's proposal is based on the analogia spiritus—the relationality that governs and guides divine-human knowing and being. The essay encourages those working in the science-theology dialogue to engage Loder's work as a whole, in part by including an annotated bibliography of Loder's relevant works.

Fallen Man is equated to the historically given and subjective condition of our mind, from which we may be saved by the grace of the spirit... 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. This hope is a clue to God.¹

—Michael Polanyi

Introduction: A Chance Encounter

James E. Loder Jr., the Mary D. Synnott Professor of the Philosophy of Christian Education at Princeton Theological Seminary from 1962 to 2001, once began a doctoral session on “Kierkegaard and Polanyi” for his “Philosophy of Christian Education” seminar with an anecdote. He spoke of his chance encounter with Nobel Laureate Eugene Wigner at a café in Hopewell, New Jersey. Wigner spied Loder reading a book on Einstein and seemed genuinely thrilled to talk with him about the relation of theology to psychology. At a subsequent meeting, Loder’s copy of Paul Davies’ book, *God and the New Physics*, prompted Wigner to exclaim: “Yes, God, that’s the question!”² Loder emphasized to his students how *alive* Wigner was in spirit to the possibilities and promise of science-theology dialogue. Subsequently, Loder proceeded to illuminate the interdependent relevance of Polanyi’s post-critical epistemology of science to the neo-Chalcedonian ruminations of Kierkegaard for Christian education theory—a rigorous academic exercise that pointed auditors to the sanctuary as much as to the library!

This encounter illuminates the significance for readers of *Tradition and Discovery* of Loder’s crucial engagement with the relation of science to theology. Polanyi became Loder’s key representative figure in postmodern science for discerning and explaining what it means to be personally alive in spirit in an open universe largely closed in on itself through the mythic power of the so-called Enlightenment ethos of detached reason. Polanyi’s open universe invites both scientists and theologians to indwell reality with self-implicating passion until aspects of its hidden intelligibility intuited through the body emerge in discoveries, letting questions of the meaning and purpose implicit in those discoveries implicate the knower (“Eureka” on the way to its ultimate destiny in “Alleluia”).³ And Kierkegaard, his most important life-long interlocutor, represented for Loder one who had experienced and explicated in extraordinary personal depth what it means to be alive in spirit to the Spiritual Presence of Christ and to live in, and testify to, that Personal Reality in the world conforming itself to spiritless pursuits of objectivity (“Alleluia” vivifying the ultimate meaning of every “Eureka”). This Wigner-Loder encounter dramatized Loder’s conviction that the embodied creativity of the human spirit generating “Eureka” in scientific discovery and praise in Christian worship bore an astounding, intimate, and complementary analogical relationship to the even-more powerful transformative impact of the Holy Spirit on human thought and action. Loder wanted his students to live in the awesomeness of this *analogia spiritus* so that it could inform and shape their vocations as provocateurs of the human spirit transformed by the Holy Spirit. The key for Loder is the relational nature of the self-relating human spirit and the Self-relating Holy Spirit.

In a recent essay for *TAD*, David James Stewart points to the lack of wholeness in the appropriation of Polanyi’s work by theologians who either fail to account adequately for the content of their own theological tradition or fail to grasp the full

extent of Polanyi's insights as a relevant dialogue partner that recognizes "the extent to which it is only *a theological mode of inquiry* that can bring to fruition the ambitions of Polanyi's philosophy."⁴ Loder took up precisely this challenge by focusing on the Christomorphic nature of spirit-to-Spirit relations. He argued that the full impact of Polanyi's insights into scientific inquiry and the full content of the Christian testimony to Christ is understood and expressed most fully when both scientific inquiry and Christian experience are indwelt and explicated through the *analogia spiritus* revealed in Christ. To capture the distinctiveness of Loder's project we will look first to how he came to this conviction and then look at how this conviction guided his indwelling of Polanyi's epistemology to surprising ends.

Convictional Encounters

We must first describe Loder's own personal experiences of transcendence in the context of death, since death signifies the end of knowing, personal and otherwise. In the first encounter, Loder, at the time enrolled in Princeton seminary, fell into despair and illness at the death of his beloved father. Crushed in spirit, he was met by a Spiritual Presence that impacted him bodily and generated a profound sense of spiritual renewal and hope.⁵ This experience awakened in him the passion to know what had happened to him in this encounter and subsequently to examine and explicate the generative dynamics discernable in experiences like his as a serious matter for academic inquiry. Returning to seminary, he began to read Kierkegaard seriously (of whom he testified "provided language for my head") and, after graduation, enrolled in Harvard through a grant to study the relation of religion to mental health.⁶ His dissertation described the surprising positive commensurability between the therapeutic, reality-restoring creative pattern in Freud's analytic psychotherapy and Kierkegaard's account of the pattern of reality-restoring transformation in Christian conversion.⁷ We might say that this correlation describing self-implicating knowing toward discovery in both therapy (science) and conversion (theology) formed Loder's early version of the *analogia spiritus*. After a residency at the Menninger Foundation, Loder was called back to Princeton Seminary as a tenure-track professor of the philosophy of Christian Education, a discipline in which he had virtually no experience.

Had Loder's academic efforts integrating science and religion in practical theology continued "uninterrupted" in this "Harvard trajectory" he no doubt would have made a significant contribution to heuristic interdisciplinary models of practical theology.⁸ But Loder confessed that his academic work before 1970 had largely suppressed—in the interest of academic rigor—the more crucial dynamic at work in redemptive human experience—the Holy Spirit.⁹ Ironically, the personal power of the Spiritual Presence of Christ that had awakened him and that motivated his vocation had been diminished in the academic culture of the seminary. But in August 1970, a second

existential interruption—an accident on a New York expressway that crushed his body and threatened his life—awakened Loder’s spirit again to the Divine Presence that had met him so powerfully at the death of his father. In his spoken and written testimony of this event he described his sense of being known and lived by Another Life pouring through him bringing personal order out of devastating chaos. Loder’s second encounter with this “alien” yet generative Presence permanently reconstituted the structure of his being in terms of a Convictor-convicted relationality, transformed his passion to know reality into “faith seeking understanding,” and altered the spiritual center of his vocation as witness, in a scientific culture, to human participation in the inner life of God through the Spirit.¹⁰ He wrote:

Speaking of conviction draws on judicial imagery and declares that one is thoroughly convinced; the case is incontestable; the conviction will stand as part of a permanent record. In this imagery three axes of conviction are evident: the Convictor, the convicted person, and the endurance through time of the convictional relationship between them. Speaking of “experience” in relation to conviction means that the convicted person is compelled to reopen the question of reality in light of the presumed nature of the Convictor and the convictional relationship... “convictional experience” discloses reality and calls for new interpretations [of reality].¹¹

The reference to the nature of the Convictor-convicted relation points to the transformation of the *analogical spiritus* in terms governed by the Holy Spirit rather than the human spirit. Barth described this governance in terms of the “Chalcedonian” structure of the Spirit’s action.

The work of the Holy Spirit...is to bring and to hold together that which is different and therefore, as it would seem, necessarily and irresistibly disruptive in the relationship of Jesus Christ to His community, namely, the divine working, being, and action on the one side and the human on the other, the creative freedom and act on the one side and the human on the other, the eternal reality and possibility on the one side and the temporal on the other. His work is to bring and to hold them together, not to identify, intermingle nor confound them, not to change the one into the other nor to merge the one into the other, but to coordinate them, to make them parallel, to bring them into harmony and therefore to bind them into a true unity.¹²

We will have more to say about this connection between Loder's convictional experience and the "Chalcedonian" shape of the Spirit's action. But for now it is important to emphasize that Polanyi's concern for the knower's personal involvement in scientific inquiry and Loder's convictional experience both compel the question of human nature itself to become a "third-realm of discourse" in the theology-science dialogue. This concern for the nature of the knower becomes especially acute when the knower confronts the intrinsic limits of reason in both science and theology. Loder's indwelling of Polanyi's epistemology gave him the criteria for understanding and explaining, in scientific terms, the legitimacy of convictional experiences as sources of true knowledge about human nature. Polanyi also pushed him to indwell further the Christian tradition in terms of the Spirit's dynamic impact on the human spirit and to give account of this transformational action scientifically.

The Dynamics of Personal Knowing: The Logic of Transformation

Loder's indwelling of Polanyi's epistemology is evident in his groundbreaking book *The Transforming Moment* (1981) and virtually everything he wrote after that. While Polanyi is not quoted extensively in this book, his epistemology permeates the text. Polanyi informs Loder's argument that true observer-involved scientific inquiry, by overcoming the eclipse of the personal in the Enlightenment mythos, is the true dialogue partner with theology.¹³ Furthermore, Loder lays out his five-fold transformational logic or "grammar" of the knowing event and shows its relevance to diverse knowing contexts—scientific, aesthetic, therapeutic, etc.—in a way that resonates with Polanyi's paradigm. What follows is a short summary of Polanyi's insights infusing Loder's logic of transformation intrinsic to the human spirit's knowing.

1. *Fiduciary Stance*: Loder accepts Polanyi's "faith" in the intelligibility, order, and unity of reality that is the tacit basis of the human longing to know. Human beings have a bodily link to the universe such that all knowing draws upon this tacit dimension as it seeks to discover the hidden intelligibility of an open universe. Loder may have regarded Polanyi's "faith stance" as a prolepsis informing all knowing on the way to discovery.
2. *Scanning*: When the knower encounters conflict in knowing, the knower draws on the tacit dimension in a deep scanning process, Loder's term for Polanyi's indwelling. Anomalies revealed between object and frame draw on the tacit to intuit alternative orderings of reality in an effort to resolve the conflict and relate the knower to the enlarged frame of reference. Indwelling or scanning involves substantially the subconscious in Loder's epistemology.

Scanning is essentially kinetic, inherently moving toward an open future that cannot be contained in any system.

3. *Insight*: The knower counts on the tacit dimension to integrate inquiry in the interplay of indwelling. Inevitably, a hidden order emerges through imaginative bisociations to reconstruct the knowing context and one's place in it in surprising ways. Loder emphasized in particular the play of imagination in generating these insights and the central place of discovery, ala Polanyi, in the function of intelligibility. All true knowing has an "event" quality (Loder often rehearsed Polanyi's use of Einstein in this regard).
4. *Release*: Energy bound up in the conflict and the scanning process is released in a celebration of discovery (Eureka!). Loder accepts Polanyi's understanding that discovery of reality is not an end unto itself but an invitation to discover more in an open universe desiring to make itself known. He also taught that the process of knowing can be initiated by discoveries of the answer before one knows the conflict, which energizes passion toward discovery (as in Loder's own convictional experiences).
5. *Interpretation*: For Polanyi, discovery required processing a new construction of meaning as the knower learns to attend "from" the new context of meaning "to" one's own environment and application. Loder expounded a similar concern in his transformational grammar and the Polanyian concern that discovery is only complete when it inspires the knower to make his/her findings explainable in terms acceptable within a fiduciary community.

This correlation of personal knowing and the "logic of transformation" describes the dynamic movement of the human spirit indwelling reality with passion toward new discoveries of its hidden intelligibility central to Loder and Polanyi. Allusions to Polanyi leading to an explicit reference to him are noted in Loder's description of the transformation of subject-object relations.

What we call "object" is an emergent synthesis of so-called subjective and objective factors. Therefore what is known becomes knowledge because the knower has been addressed, struck, confronted, attacked, or attracted to an "object," and in response he or she has sensed, felt, or incorporated it on the basis of previous analogical experience. Whatever has violated the serenity of his or her senses, sensibilities, or good sense enough to become an "object" has also been embodied by the knower on the basis of some bodily, sensate, proprie—*in short, some subjective—basis*. In knowing anything, we respond

more subliminally and thus more totally than is fully recognized. “We know more than we can tell,” says Michael Polanyi. That is, “objects” impinge on our knowing in ways that we scarcely recognize and figure into the results of our presumably rational processes in ways that we do not readily acknowledge.¹⁴

Much more could be said about the epistemological commensurability between Loder’s “logic” and Polanyi’s “personal knowing” on the level of the human spirit’s generative capacities. But this last sentence about “objects impinging on our knowing” in surprising ways implies that we must attend to the radical limits to human knowing that we intuit bodily and existentially. These experiences may be the key to recognizing that the nature of the knower is fully revealed only when the knower faces her own demise. Polanyi’s epistemology infers this in two ways. First, it requires the human knower to take a stance of radical humility before the object of investigation, a stance that allows this object to inform how the knower is compelled to know it. For example, a tacit sense of death or negation may at times govern the “from-to” pattern of knowing shaping how everything is known. But second, this “marginal control” is especially apparent when the object of the knower is the Divine Presence who overcomes death. Existential acceptance of the sheer God-ness of God and the sheer creatureliness of mortal human beings who die requires a transformation in knowing and being that comes from beyond the capacity of the human creature herself. Polanyi’s famous comment about the “clue” to God in science implies that just such a transformation of the knower is requisite for knowing everything, including especially knowing ourselves.

Fallen Man is equated to the historically given and subjective condition of our mind, from which we may be saved by the grace of the spirit.... 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. This hope is a clue to God.¹⁵

Polanyi here implies that in relation to human self-knowing, it is vital that we recognize the ontological limits of human being and knowing. The category “Fallen” and the metaphor of needing to be “visited by powers for which we cannot account in terms of our specifiable capacities” means that *revelation* must be considered a *scientific* category for personal knowing in theological terms. This knowing at the ontological limits transforming the knower bears analogy to knowing in other realms of science, like quantum worlds, in which the knower changes, and is changed by, the object of investigation. Loder’s work with Neidhardt in *The Knight’s Move: The Relational Logic*

of the Spirit in Theology and Science explored and explicated this epistemological relationship in exhaustive detail under the theme of complementarity. Complementarity is the unique form reason takes when, as in quantum investigation, a logical relation between two incommensurable or paradoxical descriptions or sets of concepts are required for a comprehensive understanding of that single phenomenon or object.¹⁶ But they argued that the epistemological analogy becomes ontologically established only through the Holy Spirit's transformation of the knower, transfiguring personal knowing into convictional knowing.¹⁷ We now touch on this ontological transformation of the knower in Loder's scientific description of revelation in convictional experience as required by Polanyi.

The Transformation of Personal Knowing and Being According to the *Analicia Spiritus*

In an important essay, “The Place of Science in Practical Theology: The Human Factor,” Loder expounds (through T.F. Torrance) Polanyi’s notion of the relation of indwelling to prolepsis. Indwelling reality with integrity requires that “the phenomenon under investigation” must be permitted to disclose how it is to be known through a dynamic process that requires prolepsis or an “anticipatory glimpse” intuitively comprehensive enough to account for the reality being indwelt.

[W]hat is required of the scientist...is to “indwell” the phenomenon...the scientist must reach intuitively into the phenomenon and grasp at the tacit level the deep inner structure of the phenomenon. What Polanyi describes here is what the Greeks called *prolepsis*, an anticipatory glimpse, a proleptic conception; it is an implicit apprehension that is imprinted upon the informed mind because the inner structure of the phenomenon bears a kinship to our knowing and what we can know as we allow ourselves to indwell the phenomenon...Such foreknowledge is...generated out of indwelling and allowing the gap that stretches from experience to idea to be bridged by an intuitive surmise evoked by deepening coherences that gradually emerge from the interaction between the knower and the known and eventually lay bare the internal structure of the reality being investigated.

Loder continues: “The tacit dimension needs to be immersed in the phenomenon and thoroughly informed, but the explicit cognitive aspect of knowing cannot discover the truth of a given reality unless and until it is guided by a prolepsis of its inner structure or nature.”¹⁸

Loder argued, according to Polanyi's insights, that "the gap" that stretches between human being and knowing in the face of death brings any humanly generated "intuitive surmises" to "evoke coherence" to shipwreck. When prolepsis generated by the human spirit comes up against ontological limits of human experience an alternative prolepsis is required by science and can only be provided by revelation. Yet the prolepsis must be communicated in a medium that connects to the deepest core of human nature in order to be received. And the prolepsis must have the vital power or energy to establish compelling motivations to keep us "knowing more than we can tell" in the face of death. Loder's scientific answer to these Polanyian requirements is the relationality revealed in the God-Man, Jesus Christ, and given "scientific" articulation in the Chalcedonian explication of that relationality. The human spirit's self-relating power requires grounding in the Holy Spirit's self-relating power if it is to experience the actuality of this Christomorphic relational coherence. Loder writes:

[I]nherent in any description of the Holy Spirit there is a perennial difficulty in bringing the self-relational quality of the Divine Spirit to bear on the self-relational quality of human experience. Nevertheless, precisely this difficulty is the decisive aspect of the concept of "spirit" to be addressed in our recovery of the coherence in Christ. In opposition to distorting dualistic assumptions and the consequent fragmentation of our current world views, we need to reengage and reinstate self-involvement in objective knowledge and objectivity in self-knowledge within the work of the human spirit; correlative, we need to reclaim God's self-involvement within the created order and at the same time the contingent interdependence of that order within and upon God's grace by the power of God's Spirit. Thus, spiritual coherence in Christ may be envisioned as a Chalcedonian-like union of the Divine Spirit with the human spirit, giving evidence that the human is heir of the renewal by God of all creation (Rom. 8:16ff).¹⁹

Again, this reference to Chalcedon, recalling the quote from Barth above, reveals that the proleptic anticipation bestowed upon the believing spirit in convictional experience is a Christomorphic actualization of the *analogia spiritus* transfiguring human nature itself relationally.²⁰ This is true because "relationality is revealed to us definitively in the inner nature of Jesus Christ. In Christ's nature as fully God and fully human, we have the definition of relationship through which all other expressions of personal, social, and cultural relatedness are to be viewed."²¹ Most importantly, human nature itself becomes the bearer of this Christomorphic actuality through conviction, such that all relational dimensions of knowing—tacit-focal, from-to, figure-ground, prolepsis-indwelling—reflect the *analogia spiritus* (the Spirit of the Mind of Christ).

Christ becomes the pattern connecting the inner structures of human and divine realities, the Living Proleptic Presence that governs knowing and being for the convicted person and community.

Furthermore, convictional experience reveals that this Living Proleptic Presence is irreducibly Personal and takes the form of divine pedagogy, such as is depicted in the New Covenant (Jeremiah 31) and in the teachings of Paul, Augustine, Calvin and Barth.

[T]he passion of faith is the theological name for “indwelling”; the penetration and exploration of the inner life of God is the work of the “inner teacher” as Calvin and Augustine described the work of God’s Spirit in the faithful believer. The insight that comes is one that discloses that God is irreducibly Subject; the presumed object of the inquiry turns out to be its origin and its destiny making the investigator the object of grace and the inquiry of faith a response to God’s initiative. Indwelling the inner life of God is to come to the remarkable realization that such indwelling is derivative, a human mirror of the indwelling presence of God’s Spirit in the investigator. The staggering vision of truth, the climax of the inquiry, is the vision of God and the response is worship.²²

The transformation of human nature convictionally and the proleptic mediation of the Personal Presence of Christ informing all knowing transforms Loder’s “transformational logic” and Polanyi’s personal knowing in profound ways.²³

1. *Fiduciary Stance*: Polanyi’s faith in the intelligibility of reality is transformed into Kierkegaard’s longing for blessedness (*Salighed*). The convicted person indwells Reality through the lens of the God-Man, the ontological prolepsis bestowed through the inner witness of the Spirit in convictional experience, who indwells the knower and manifests itself tacitly and explicitly in terms of the asymmetrical bipolar relational unity revealed in “Chalcedonian Reality.”
2. *Indwelling*: Polanyi’s “knowing more than we can tell” finds its goal and source in the God-Man structure of reality, so that human spirit’s indwelling becomes, through the Spirit’s proleptic Gift of being known, a deeper movement into the intelligibility revealed ultimately in Christ. The indwelling process is transformed as a radical revelation of our contingent relation to the Creator, so that all knowing retains the marks and humility of this ontological contingency in the act of indwelling.

3. *Insight*: Whereas Polanyi personal knowledge allows the universe to yield up its hidden intelligibility through the person of the scientist, who is an indispensable factor in the knowing event, Loder argues that when intelligibility seeks to indwell the Absolute Person, a figure-ground results such that Christ becomes the Knower and the [human] knower becomes the known. Now one is known through and through as part of the contingent order, proleptically embodying the consummation of Christ. The form of insight is human through and through, but in substance the human knower becomes him/herself the embodied insight—the one thoroughly known.
4. *Release*: Polanyi's notion of discovery in an open universe revealing and energizing further knowing of the universe becomes, in convictional terms, an act of worship and a celebration and empowerment to move deeper into divine-human relationality.
5. *Interpretation*: Polanyi's processing of new constructions of meaning allowing the knower to attend "from" the new context of meaning "to" one's own environment and applied becomes under conviction the inner witness of the Spirit bearing witness to the Christomorphic nature of reality and mediating "from" the eternal "to" the existential according to the logic of the Spirit. Christomorphic relationality now determines the form rational intelligence takes, both tacitly and explicitly.

Conclusion

Andrew Walls, the great missiologist, once wrote that Christ becomes more fully known in and through the Church's engagement with culture, grounded in the Gospel's "bewildering paradox" revealed in the Incarnation.

The bewildering paradox at the heart of the Christian confession is not just the obvious one of the divine humanity; it is the twofold affirmation of the utter Jewishness of Jesus and of the boundless universality of the Divine Son. The paradox is necessary to the business of making sense of the history of the Christian faith. On the one hand it is a seemingly infinite series of cultural specificities—each in principle as locally specific as utterly Jewish Jesus. On the other hand, in a historical view, the different specificities belong together. They have a certain coherence and interdependence in the coherence and interdependence of total humanity in the One who made humanity his own.²⁴

Walls uses the metaphor *translation* (Loder's transformational logic transformed) to argue that the distinctive nature of Christ's impact on the society becomes manifest precisely wherever the church engages culture creatively to translate God's redemptive mission in cultural terms. In such engagements

a new conceptual vocabulary had to be constructed. Elements of vocabulary already existing in that world had to be commandeered and turned towards Christ... (so that) people began to see Christ in their own terms... the process was hugely enriching; *it proved to be a discovery of the Christ... as though Christ himself actually grows through the work of mission... the divine saving activity can be understood in terms of translation.* Divinity is translated into humanity, but into specific humanity, at home in specific segments of social reality. If the Incarnation of the Son represents a divine act of translation, it is a prelude to repeated acts of re-translation as Christ fills the Pleroma again—other aspects of social reality. And the proper response to such activity is conversion.²⁵

Both Michael Polanyi and James Loder took up Walls' apostolic vocation, calling persons enslaved to dehumanizing ways of knowing and being to the kind of conversion that would liberate their spirits and render them fully alive. My hope in this essay is to inspire readers of *Tradition and Discovery* to consider indwelling Loder's work in light of Polanyi and Polanyi's work in light of Loder on the chance that something surprising and life-changing might emerge—like the discovery of Alleluia in every Eureka.

ENDNOTES

¹The author wishes to thank Alan Beasley for introducing him to Phil Mullins at a coffee shop in Bremerton, WA in the summer of 2015. He also wants to thank Dr. Mullins for the conversation about James Loder's use of Polanyi that led to the opportunity to discuss this important topic with readers of *Tradition and Discovery*.

²Transcription of this course and others between 1991 and 1996 are housed in the Loder archive at Speer Library, Princeton Seminary.

³Loder considered Polanyi's *Personal Knowledge* (Hereafter *PK*) as a "landmark work on the philosophy of science" emphasizing the "irreducibility of the human factor in scientific discovery."

⁴See endnote 1 in Stewart's *TAD* essay "The Fulfillment of a Polanyian Vision of Heuristic Theology," 15. Stewart drew on Andrew Grosso's comments on a distinction Alister McGrath made between "foundational" and "illuminative" interactions with Polanyi by theologians. Grosso argued that theologians who interacted with Polanyi in illuminative ways often failed "to account for the full scope" of Polanyi's thought, while those who took a more foundational approach "often failed to

account adequately for the dogmatic content of the theological tradition and the responsibilities that inhere with its reception and perpetuation.” See Grosso, *Personal Being*, 114.

⁵Loder’s account of this experience and its impact on his life vocation was told to me in a taped interview (April, 2001). See Wright, “Are You There?” (13-14) and “*Homo Testans*,” (5-7). See also Kovacs, *Relational* (11-13).

⁶Professor Hans Hoffman, whom Loder consulted after his experience, put Loder onto Kierkegaard. Hoffmann also took Loder to Harvard after he received a grant to study the relation of religion and mental health. See Wright, “Are You There?” (14) and “*Homo Testans*” (7) as well as Kovacs, *Relational* (13).

⁷See Loder, “The Nature of Religious Consciousness in the Writings of Sigmund Freud and Soren Kierkegaard: A Theoretical Study in the Correlation of Religious and Psychiatric Concepts (PhD Diss. Harvard University, 1962) and the published version *Religious Pathology and Christian Faith* (Philadelphia: Westminster, 1966).

⁸Loder worked on the ground floor of a renaissance in practical theology that continues today, signified by the 1992 establishment of the International Academy of Practical Theology and the *International Journal of Practical Theology*. See Wright, “Contemporary Renaissance.”

⁹Loder told the author he was “upgrading psychoanalysis a bit.” See “*Homo Testans*,” (9).

¹⁰Loder told the author that his return to academics after this experience placed him in an immense personal turmoil about his vocation and his relation to the academy.

¹¹*Transforming Moment*, 6 (1981 ed.), 14 (1986 ed.) Hereafter *TM*. One can detect Polanyi’s epistemology in this description, in terms of the fiduciary passion that drives inquiry toward discovery, the need for a proleptic anticipation to guide the “from-to” dynamics of indwelling, and the “soft hierarchy” or “marginal control” implied in the Convictor-convicted relationality.

¹²Barth, *Church Dogmatics* IV 3 second half, 761, quoted in Loder & Neidhardt, *The Knight’s Move*, 52 (Hereafter *KM*).

¹³For Loder, Polanyi’s *Personal Knowledge* elaborated a relationally constitutive post-critical foundation for knowledge with enormous consequences in every realm of discourse. “Polanyi’s profound philosophical, scientific, and religious comprehension makes relationality the central and irreducible core of all intelligible acts of knowing” in the postmodern world. See *KM*, 42.

¹⁴*TM*, 1st ed., 24 (2nd ed., 30). Esther Meek has noted this correlation of Loder and Polanyi in her excellent treatment *Loving to Know*. Her discussions of Loder’s work in “Knowing as Transformation” (chapter 5) and “Knowing before the Face of the Holy” (chapter 10) provide one of the best discussions available of Loder’s understanding of transformational knowing in relation to convictional experience. What Meek does not discuss is Loder’s understanding of the Christomorphic nature of the relationality that connects divine and human action in the Spirit and that governs faith’s knowing of reality, including knowing that pertains to the theology-science dialogue.

¹⁵Quoted in *KM*, 19.

¹⁶*KM*, 73-77. Complementary as the form intelligence takes emerges under certain circumstances: (1) when the knower is included; (2) when the whole truth of a situation requires moving through two separate realms, only one of which yields to analytical and convergent reason (as in subatomic world), and (3) when the results of the inquiry require formulations that communicate the situation to a community of scholars. Here the truth is both baffling and necessitated by the evidence

and compels reason to reveal its intrinsic relational structure. In a later essay Loder commented: “Complementarity is the logical relation between two descriptions or sets of concepts applicable to a single phenomenon or object, which, though mutually exclusive, are nevertheless both necessary for a comprehensive description of the phenomenon or object.” In Bohr’s account, the [particle-wave] paradox “is forced upon understanding by ‘quantum weirdness’” such that “the data observed forces explanation into a paradox statement” in which “there is no possible resolution to the issue by some more advanced method of observation. It is an intrinsically irresolvable contradiction which is forced upon human understanding by the evidence.” The Bohr-Kierkegaard connection or “Copenhagen epistemology” is a unique form of personal knowing revealed at the boundaries of intelligibility. See “The Place of Science,” 31 (Hereafter PS).

¹⁷Loder notes “this ‘Copenhagen epistemology’ is what has prompted Chris Kaiser and others to recognize that the pattern of complementarity is a near replication of the paradox inherent in the Chalcedonian formulation of the person and nature of Jesus Christ.” See Loder, PS, 31; see also *KM* 78, 80, 84-85.

¹⁸PS, 28-29. Loder here draws on T. F. Torrance, *Transformation and Convergence in a Frame of Knowledge* Ch. 3, especially 113-115.

¹⁹*KM*, 32f.

²⁰In its own status Chalcedon reflects the ontological and epistemological linchpin of Christian theology (Torrance). In an essay “Normativity and Context in Practical Theology,” Loder wrote: “By implication … the interplay between theology and the human sciences properly reflect his nature when these are the characteristics of the relationality that establishes their differentiated unity … When the relationality is Christomorphic, then each part includes the whole, but the whole is properly understood only as the relationality which constitutes it is recognized as an asymmetrical, bipolar unity. As Torrance’s position suggests … the relationality that pertains between theology and the human sciences only becomes what it is through the transforming action of Christ’s Spirit in and through the human spirit” (368-369).

²¹*KM*, 13. Loder noted: “This applies as well to the model we are using in the methodology of this study; the inner nature of Jesus Christ ultimately defines the scope and limits of the relational model; not the reverse. Our use of the model is intended to reveal the illuminative and explanatory significance of viewing all creation through the eyes of faith in Jesus Christ.”

²²PS, 29f.

²³Loder wrote: “For example, statements of dialectical unity (e.g. one person, two natures; three persons, one essence; *creatio ex nihilo* of the natural order as simultaneously contingent and independent; human nature as both dead yet alive; God fully present yet coming; human relationships as mutual creation of each other in mutual coinherence) only genuinely illuminate creation, human existence, and the Divine nature if they are understood from within the inner life of God; that is, by God’s Spirit according to God’s self-knowledge.” See *KM*, 21.

²⁴Andrew Walls, xvi.

²⁵Walls, xvif. (Emphasis mine).

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Annotated Bibliography of Loder's Major Works for the Science-Theology Dialogue

"The Nature of Religious Consciousness in the Writings of Sigmund Freud and Soren Kierkegaard: A Theoretical Study in the Correlation of Religious and Psychiatric Concepts (Doctoral dissertation, Harvard University, 1962). Loder discerned and correlated the dynamic inner patterns of restorative consciousness in Freudian psychoanalysis and Kierkegaard's account of conversion experience in relation to Herbert Silberer's "hypnagogic paradigm."

Religious Pathology and Christian Faith (Philadelphia: Westminster Press, 1966). Loder's dissertation reworked for publication, showing his interest in "an epistemology that is both theologically and behaviorally sound but that at the same time has enough integrity of its own to give it critical and constructive power both for its parent disciplines and for other interdisciplinary studies."

"The Fashioning of Power: A Christian Perspective on the Life-style Phenomenon." In A. McKelway & E. D. Willis (Eds.), *The Context of Contemporary Theology: Essays in Honor of Paul Lehmann*. (Atlanta: John Knox, 1974) 187-208. Loder critiques the pervasive achievement style of life in America through the lens of convolutional transformation of the knower.

"Developmental Foundations for Christian Education." In M. Taylor, Ed., *Foundations for Christian Education in an Era of Change* (Nashville, TN: Abingdon Press, 1976) 54-67. Loder's early plea for integrity in the way Christian education theory uses the sciences and theology faithfully and systematically.

"Creativity in and beyond Human Development." In G. Durka & J. Smith, Eds. *Aesthetic Dimensions of Religious Education* (New York: Paulist Press, 1979) 219-235. An interdisciplinary paradigm of creativity in which "the creative dynamics operative in human development may be seen from a theological standpoint as a human figure for

the person-creating, person-revealing work of God's Spirit," such that "the dynamics of creativity find their ultimate ground and explanation in the dynamics of revelation."

"Negation and Transformation: A Study in Theology and Human Development." In Christaine Brusselmans, et al., *Toward Moral and Religious Maturity* (Morristown, NJ: Silver Burdett Co., 1980) 166-190. An important discussion of a theme that is unique in Loder's theory, the problem of negation and its transformation revealed theologically in convictional experience.

"Transformation in Christian Education." Inaugural address published in *The Princeton Seminary Bulletin*, III (1) new series (Dec. 12, 1979), 11-25. Reprinted in *Religious Education*, 76 No. 2 (1980):204-221. Loder sets out his "logic of transformation."

"Conversations on Fowler's *Stages of Faith* and Loder's *The Transforming Moment*." In *Religious Education* 77 No. 2 (1982):133-148. Summarizes the debate between Fowler and Loder at Michigan State University in 1981. Illuminates the promise of a vital interchange between science and theology and what constitutes a truly theological approach to this integrative field.

The Transforming Moment: Understanding Convictional Experiences (San Francisco: Harper & Row, 1982). This book should be considered as a groundbreaking treatise in the area of epistemology and theology and reveals Loder's theological and scientific development of the *analogia spiritus* that governs the relation of scientific discovery and Christian revelation. Loder argues that experiences of the Holy Spirit ("convictional experiences") transform personal knowing into convictional knowing generative of profound insights into the nature of reality and of our participation in reality, such that such experiences "need to be recognized as sources of new knowledge about God, self, and the world.

The Transforming Moment, 2nd Revised Ed. (Colorado Springs, CO: Helmers & Howard, 1989). Revision includes a Glossary that helps make Polanyi's contribution to Loder's work more explicit.

With Jim Neidhardt. *The Knight's Move: The Relational Logic of the Spirit in Theology and Science* (Colorado Springs, CO: Helmers & Howard, 1992). Loder and Neidhardt's exhaustive effort to establish a theological and relational basis for enabling integrity in the science-theology discussion based on the *analogia spiritus*.

"Incisions from a Two-edged Sword: The Incarnation and the Soul/Spirit Relationship." In B. Childs & D. Waanders, Eds. *The Treasure of Earthen Vessels: Explorations in Theological Anthropology* (Louisville, KY: Westminster/John Knox Press, 1994), 151-173. Loder makes a theological interpretation of Hebrews 4:15 and shows how

psychology's emphasis on "soul" and theology's emphasis on "spirit" should be considered in light of the *analogia spiritus* if the integrity of that relation is to be honored.

The Logic of the Spirit: Human Development in Theological Perspective (San Francisco: Jossey-Bass, 1998). Loder reshapes human developmental theory through the lens of the *analogia spiritus*, showing how neo-Chalcedonian practical theology generates indwelling of the inner movement of the human spirit for meaning and purpose at a deeper level and calls for the redemptive transformation of human transformations.

"Normativity and Context in Practical Theology: The 'Interdisciplinary Issue'." In *Practical Theology: International Perspectives*, Schweitzer, F. & van der Ven, J. A., Eds. New York: Peter Lang, 1999) 359-381. Loder's most succinct account of practical theological science grounded and governed by the Spirit. His focus on methodology owes specific allegiance to Polanyi's epistemology.

"The Place of Science in Practical Theology: The Human Factor." In the *International Journal of Practical Theology*, 4 (1), 2000, 22-44. Loder's discussion of significant developments in the physical sciences—relativity, complementarity, chaos theory—that highlight the irreducibility of "the human factor" in all knowing and that provide practical theology with a scientific warrant to consider the God-Man as the ultimate relationality revealed through the Spirit

Educational Ministry in the Logic of the Spirit (Unpublished, available in the Loder Archive of Speer Library, Princeton Seminary). Loder shows how the *analogia spiritus* reshapes the formative dynamics of education described by comprehensive human action theory (Talcott Parsons) by revealing its inner structure as a dynamic relationality between socialization and transformation. When this dynamic relationality is itself transformed by the Holy Spirit, education becomes Christian as a reflection of the nature of Jesus Christ. Important for revealing the power of the *analogia spiritus* to illuminate the full range of human-divine action.