

NOTE

FAITH, CHURCH, AND GOD: INSIGHTS FROM MICHAEL POLANYI

Michael Polanyi can scarcely be reckoned as a theologian in his own right, but he has had a great and increasing influence in theology, especially since his death in 1976. Among prominent theologians, Thomas F. Torrance, Polanyi's literary executor, has probably made the most extensive use of Polanyi, but his influence is apparent in the work of numerous other theologians and philosophers of religion in England and the United States.¹ Polanyi's writings have, moreover, been studied in a vast array of doctoral dissertations in the field of religious studies.²

Although it would be profitable to explore the secondary literature, I have chosen in this paper to discuss themes in Polanyi's own work that have engaged, or deserve to engage, the attention of theologians. I shall divide my presentation into three main parts: faith and revelation; community and tradition; and the doctrine of God. Under the first heading I shall discuss theological epistemology; under the second, ecclesiology; and under the third, theological ontology.

FAITH AND REVELATION

It will leap to the mind of anyone who has read even a few pages of Polanyi that his doctrine of the fiduciary component in human knowledge has immense significance for theology. According to Polanyi, all acts of comprehensive knowledge either are or depend upon faith, in the sense of a free commitment to that which could conceivably be false.³ If this thesis is true, theology, as the work of faith seeking understanding, is not an anomaly among the cognitive disciplines. Religious ideas are acquired, developed, tested, and reformed by methods at least analogous to those pursued in the natural and social sciences. Christians, or adherents of any other religious faith, need not be embarrassed by their

¹ Among the theologians familiar to me, the following may be mentioned as influenced by Polanyi: Ian G. Barbour, Walter E. Conn, Langdon Gilkey, Jerry H. Gill, John F. Haught, Thomas A. Langford, James Loder, Andrew Louth, Robert T. Osborn, William H. Poteat, Richard J. Rousseau, William T. Scott, and Jerry G. Sobosan.

² A published dissertation is that of John V. Apczynski, *Doers of the Word: Toward a Foundational Theology Based on the Thought of Michael Polanyi* (Missoula, Mont.: Scholars, 1977). Also based on a dissertation is Richard L. Gelwick, *The Way of Discovery: An Introduction to the Thought of Michael Polanyi* (New York: Oxford University, 1977). Unpublished dissertations, including those by Robert Innis, Joseph W. Kroger, Bruno V. Manno, Aaron Milavec, and Gerald H. Smith, have resulted in important articles.

³ M. Polanyi, *Personal Knowledge* (New York: Harper Torchbooks ed., 1964) 266.

inability to verify their convictions by formal proof from indubitable premises, for no other science can survive this test. Not only is this Polanyian thesis supportive of the credibility of religious statements; it also opens up rich possibilities for theology to profit from the methodology of the natural and social sciences.

A first exposure to Polanyi's theory of knowledge could easily produce an unsettling skepticism. Affirmation, according to Polanyi, requires courage; it is inherently hazardous, and in that sense dubitable. But dubitability is not doubt, nor does it imply the obligation to doubt. Paradoxical though it may sound, it would in fact be impossible to doubt all that we could doubt; for doubt itself is a fiduciary act.⁴ By a brilliant retorsion, reminiscent of some of Augustine's antiskeptical writings, Polanyi shows that every doubt is rooted in faith. The grounds for doubting, as for any other fiduciary act, must be tacitly appraised. Polanyi's analysis of the dialectic of faith and doubt is more complete and nuanced than that of Paul Tillich, to which Polanyi acknowledges his indebtedness.⁵

Polanyi's doctrine of tacit knowing is instructive for Christian apologetics. As he luminously shows, the clues pointing to religious belief, or to any belief for that matter, do not function as clues unless we shift our attention away from the clues themselves and concentrate on their joint meaning.⁶ It is futile, therefore, to try to argue for the truth of Christianity by using miracles or the like as premises. Since many of our reasons are known only in a subsidiary or even a subliminal way, we can never state exhaustively the reasons why we believe. Yet the apologetical enterprise, which seeks to test and exhibit the validity of one's commitments, is very useful for distinguishing between authentic grounds for belief on the one hand, and fraud, illusion, and fanaticism on the other. By turning our attention from the object of faith to those clues that can be explicitly identified, we may find either that they do not exist as supposed, or that they cannot bear the meaning that faith attributes to them. This kind of detailed examination, however, can never produce faith. In the last analysis, we believe because we responsibly decide to do so on the basis of clues whose existence or evidential force cannot be fully specified. We simply trust our capacity to integrate the clues as subsidiarily known. At this point Polanyi the scientist speaks, probably without realizing it, in almost the same terms as Newman the theologian. Of all the theological works familiar to me, I would judge that Newman's *Grammar of Assent* is the one that bears closest comparison with Polanyi's *Personal Knowledge*.

⁴ Ibid. 273.

⁵ Ibid. 280, 283.

⁶ M. Polanyi, "Faith and Reason," *Journal of Religion* 41 (1961) 237-47, esp. 239.

As a paradigm for discovery in all fields, including science, Polanyi proposed the Pauline scheme of faith, works, and grace.⁷ Discovery begins in faith; for we must trust our own powers to perceive the problem, to envisage possible solutions, and to discriminate between the correct solution and its counterfeits. Thereupon we must labor: we must pummel our imagination to come up with plausible hypotheses. But we cannot control the outcome. The final stage, illumination, is a sheer gift. If it comes at all, it arrives unexpectedly, and very often at a moment when we are not consciously looking for it.⁸

This three-step analysis of discovery can, I believe, be profitably transferred to divine revelation; for revelation, seen from below, exhibits the structures of religious discovery.⁹ Polanyi's criteria for validating scientific discoveries are surprisingly well suited to theology. Very often, as Polanyi observes, the discoverer or, in religion, the prophet or seer feels no need for confirmation. For such a person the solution arrives "accredited in advance by the heuristic craving which evoked it."¹⁰ This insight enables Polanyi, in his own words, "to align religion . . . with the great intellectual systems, such as mathematics, fiction, and the fine arts, which are validated by becoming happy dwelling places of the human mind."¹¹ Our beliefs, Polanyi maintains, are further supported by their inherent intellectual beauty, their acceptability to persons we respect, and their cognitive and practical fruitfulness.

Theology, in my opinion, would have much to gain from utilizing the kind of criteria that Polanyi proposes for the validation of personal beliefs. Of particular interest is the idea of accreditation by correspondence with what had been actively foreknown. Theologians have long recognized the importance of antecedent expectations. Augustine and Pascal were convinced that they could not have rightly sought God without some prior intimation of the one for whom they were seeking. Newman points out that the search for revelation must always be guided by an earnest desire for it and by "that just and reasonable anticipation of its probability which such longing has opened the way" to entertaining.¹² Henri de Lubac insists that when we attain to an explicit knowledge of God, we always recognize Him as the one already familiar to us.¹³ Karl Rahner, for his part, asserts that an anticipatory knowledge (*Vorgriff*)

⁷ Ibid. 247.

⁸ M. Polanyi, "The Creative Imagination," *Chemical and Engineering News* 44 (April 25, 1966) 85-92.

⁹ I have made this point in my "Revelation and Discovery," in W. J. Kelly, ed., *Theology and Discovery* (Milwaukee: Marquette University, 1980) 1-29.

¹⁰ *Personal Knowledge* 130.

¹¹ Ibid. 280.

¹² J. H. Newman, *Grammar of Assent* (Garden City: Doubleday Image ed., 1955) 330.

¹³ H. de Lubac, *The Discovery of God* (Chicago: Regnery, 1967) 78-80.

of God is a coefficient of all human awareness and that the savior myths of the non-Christian religions, for example, bear witness to a mysterious presence of Christ in the "searching memory" of the unevangelized.¹⁴

For most believers, of course, religious belief is not the result of a sudden revelation or a personal conversion-experience. Their situation is not parallel to that of the great discoverers in science, but rather to that of competent practitioners who accept, popularize, and transmit the inherited lore of their discipline. To understand how this process of acceptance and transmission takes place in Christianity, we must now pass on to our second major heading, ecclesiology.

COMMUNITY AND TRADITION

Polanyi rarely wrote about the Church, and when he did so it was not, apparently, as a committed church member. But in his writings about the scientific community he called attention to features that are analogous to what theologians perceive in the Church.

One point of resemblance is that each of these communities, in its own way, is based on shared convictions. According to Polanyi, scientists are committed to an established method and also, to a greater or lesser degree, to the theories and insights already obtained by use of that method. He is convinced that the scientific community depends for its survival on the authoritative leadership of experts who have personally appropriated the commitments upon which the community is founded.¹⁵ These respected leaders become, so to speak, the guardians of order and continuity. Applied to the Church, Polanyi's principles would indicate that adherence to Christian revelation is inseparable from adherence to the Church and trust in her leadership to uphold and transmit the revelation.

Polanyi describes the scientific community in overtly hierarchical terms. Its acknowledged leaders and officeholders regulate the beliefs of the members not only by direct teaching but in a variety of other ways, such as control of the curriculum of instruction, the training and appointment of teachers and administrators, the bestowal of honors and degrees, the direction of editorial boards, the financing of publications, and the marginalization or exclusion of dissidents.¹⁶

A theologian would point out that the controls in the Church are somewhat similar. The ecclesiastical hierarchy regulates the standards of admission of new members, the training and ordination of the clergy; the issuance of doctrinal pronouncements, the licensing of approved publications, and the penalties inflicted for doctrinal deviations. The

¹⁴ K. Rahner, *Foundations of Christian Faith* (New York: Seabury, 1982) 318-21.

¹⁵ M. Polanyi, *Science, Faith, and Society* (Chicago: University of Chicago, 1946) 42-50.

¹⁶ *Ibid.*

hierarchical leadership must take responsibility for upholding the community's distinctive standards of truth, probity, and worship. If it failed in this task, the faithful could easily be led astray. Recognizing the need for creedal discipline, theology must submit to certain controls. Virulent criticism of authority, as Polanyi notes, undermines mutual trust and in so doing strikes at the roots of community existence. In relation to the Church, one may say that when trust in the tradition and in the authorities breaks down, the most elemental beliefs are likely to be thrown into doubt.

As Polanyi repeatedly insists, neophytes in the community must submit to a process of formation in which they learn by example and supervised performance. In a passage that can easily be applied to the Church he writes:

This assimilation of great systems of articulate lore by novices of various grades is made possible only by a *previous act of affiliation*, by which the novice accepts apprenticeship to a community which cultivates this lore, appreciates its values and strives to act by its standards. This affiliation begins with the fact that a child submits to education within a community, and is confirmed throughout life to the extent to which the adult continues to place exceptional confidence in the intellectual leaders of the same community.¹⁷

By analogy, one may say, induction into the heritage of the Church begins when the Christian child learns to pray at its mother's knee, and continues throughout life to the extent that the adult continues to trust the doctrinal authorities of the Church.

Even among respected theologians there has been an excessive tendency to objectify the Church and its traditions, as though one could come to know the community from outside by mere observation. Here Polanyi offers a valuable corrective. He points out that the community must be known by indwelling—i.e., by making oneself a part of it and sharing its life.¹⁸ Polanyi uses in this connection the very suggestive term “conviviality.” His thought on this matter will commend itself to the theologian, who is accustomed to think in terms of communion (*koinōnia*) and to view the Holy Spirit as the principle of collective consciousness in the Body of Christ. To become a member of the Church in a theologically significant sense, one must, so to speak, be caught up by its Spirit, the Spirit of Christ. The Church, in this respect, verifies to an eminent degree what Polanyi says about communities in general and the scientific community in particular.¹⁹

¹⁷ *Personal Knowledge* 207; italics in original.

¹⁸ *Ibid.* 53–54, 207–9.

¹⁹ For some theological counterparts to Polanyi's conception of tradition, see Andrew Louth, *Discerning the Mystery* (Oxford: Clarendon, 1983) esp. chap. 4, “Tradition and the

The observations of Polanyi about the formation of neophytes could usefully be applied to the reception of new converts and the process of catechesis in the Church. Christianity, even more than the scientific community, needs mature believers who have personally appropriated the patrimony and who can transmit it by example and formative influence. What Polanyi said about scientific apprenticeship applies a fortiori to Christian discipleship, which involves a far more comprehensive dependence of the novice upon the master. Although Polanyi did not specifically address the question of religious education, his statements about scientific education may be taken as an implicit warning against the tendency to transfer the matrix of religious education from the family and the home to the school, considered as an academic institution. If Polanyi was correct, religious faith cannot ordinarily be transmitted by formal instruction in the impersonal situation of the classroom, though such instruction may help one to understand and cherish the faith that one has.

Among the coefficients of any stable society Polanyi recognized the sharing of convictions, fellowship, and co-operative service.²⁰ These dimensions would appear to correspond to the functions of the Church as a community of faith and witness, of companionship, and of charitable service. In this connection it is of interest that the Third Assembly of the World Council of Churches, meeting at New Delhi in 1961, centered its discussions about the themes of witness, fellowship, and ministry (*martyrion*, *koinōnia*, and *diakonia*), and that the same tripartite division was used by the Catholic Church at the Second Vatican Council, especially in its Constitution on the Church.

Polanyi's discussion of science has surprising relevance for missiology. He pointed out that the heuristic passion, leading to discovery, necessarily overflows into the persuasive passion, leading to proselytization.²¹ Every discovery, Polanyi maintained, is universal in intent; it aspires to express what is objectively true and therefore makes claims that are universal. Consequently, he remarked, a new idea must triumph or it must die. It is threatened by all who reject it, but confirmed to the extent that many accept it. By persuading other persons to adopt our beliefs, we help to overcome our own doubts.

In this connection Polanyi's analysis of the dynamics of conversion

Tacit." In my essay "Das Zweite Vatikanum und die Wiedergewinnung der Tradition," in E. Klinger and K. Wittstadt, eds., *Glaube im Prozess: Für K. Rahner* (Freiburg: Herder, 1984) 546-62, I note especially the parallels between Maurice Blondel and Polanyi.

²⁰ *Personal Knowledge* 212. Polanyi here mentions also a fourth coefficient, authority or coercion. This we have already considered under the heading of hierarchical leadership.

²¹ *Personal Knowledge* 150.

invites our attention.²² We can never induce people to adopt a radically new outlook by arguing with them, for argumentative debate must always be conducted within the logical framework of those we are seeking to convince. The passage to a new framework of discourse implied in any scientific or religious conversion requires a new starting point, with new principles, a new method, and new terminology. Such an intellectual leap can only be the result of personal persuasion, effected by an appeal to heuristic passion rather than to detached, calculative reason. The new belief, according to Polanyi, is not something that we take hold of. Rather, it takes hold of us, carrying us away by its attractive power.²³ Conversion, then, is always a self-modifying act, as a result of which the convert becomes a new person or, in biblical terms, a new creation (2 Cor 5:17). These points, predominantly made by Polanyi in the context of science, are even more evidently true in the sphere of religion.

Polanyi wrestled long and hard with the question whether human beings, as creatures of circumstance, can have the right to attribute universal value to their own judgments. "How can we claim to arrive at a responsible judgment with universal intent," he asked, "if the conceptual framework in which we operate is borrowed from a local culture and our motives are mixed up with the forces holding on to social privilege?"²⁴ Theologians have faced the same perplexity. They have often asked themselves how Christians, as products of a limited human culture, could claim universal value for their religious faith. In replying to his own question, Polanyi propounded his doctrine of vocation. We have to accept our environmental antecedents, he maintained, as defining the conditions under which we exercise our universal responsibility. In hope, we may confidently aspire to fulfil our universal obligations in spite of our restricted capacities. In this connection Polanyi had recourse to religious language: "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 specific capabilities. This hope is a clue to God. . . ."²⁵

What Polanyi says here of the vocation of every human being to pursue universal values holds very emphatically for the Church as a whole and, in a proportional manner, for every Christian believer. Our personal vocation is determined on the one hand by our limited background as individuals, and on the other hand by the universal aims of the Church, which dares to hope for assistance from above.

Because of his concern for truth as a universal value, Polanyi could

²² Ibid. 150–60.

²³ M. Polanyi and H. Prosch, *Meaning* (Chicago: University of Chicago, 1975) 180.

²⁴ *Personal Knowledge* 322.

²⁵ Ibid. 324.

appreciate the passion for mental excellence that animates the speculative disciplines, including theology. In a passing reference to dogma, he recognized its importance for the reflective understanding of a faith previously held and practiced. Dogma was in his view an axiomatization of the faith.²⁶ It was the theorist's effort to articulate the more fundamental truths that are implicitly affirmed whenever we confess our faith. While acknowledging that such theoretical statements are secondary, Polanyi did not regard them as worthless. As in pure science, so in theology, the pure desire for truth has a legitimate and necessary place.²⁷

Polanyi liked to speak of the scientific community as a society of explorers.²⁸ The term is an engaging one. In the present context it raises the question whether the same designation could be applied to the Church. The Church is, to be sure, committed to preserving a precious patrimony handed down in Scripture and tradition, but she must continually rethink and rearticulate her faith in relation to new sociocultural situations and in relation to a growing body of human knowledge. The theological community, as a kind of intelligentsia of the Church, could perhaps be designated as a society of explorers. Creative theologians, such as Augustine, Aquinas, Luther, Schleiermacher, Tillich, Barth, and Rahner, have never been content to repeat what has been said by their forebears. Their systems have been brilliant achievements of the religious imagination, transposing the Christian message into a new key which is both faithful to the past and accommodated to contemporary culture. In this way they have discharged what may be called their theological vocation. Trusting in their own grasp of the revealed mystery in a limited cultural context, they have dared to articulate the mystery in a novel way.

Polanyi was conscious that the Church, like the scientific community, must undergo constant modification. "Christianity," he wrote, "is a progressive enterprise. Our vastly enlarged perspectives of knowledge should open up fresh vistas of religious faith. . . . An era of great religious discoveries may lie before us."²⁹ Polanyi recognized, however, that there are limits to the Church's mutability. She is committed to certain substantive beliefs that she could not abandon without self-destruction. Thus in religion, Polanyi asserted, "there prevails a measure of official doctrinal compulsion which is almost entirely absent from science."³⁰ The exercise of doctrinal authority, according to Polanyi, is more centralized and more specific in Catholicism than in Protestantism.

²⁶ Ibid. 286.

²⁷ Compare Polanyi's defense of pure science, *Personal Knowledge* 174-84.

²⁸ M. Polanyi, *The Tacit Dimension* (Garden City: Doubleday Anchor, 1967) 53-93.

²⁹ *Personal Knowledge* 285.

³⁰ *Science, Faith, and Society* 60-61.

As is apparent from our earlier discussion of hierarchy, Polanyi acknowledged the need of the Church to have a magisterium, i.e., a body of persons competent to rule on questions of heresy and orthodoxy. In discharging its responsibility to judge the compatibility of new ideas with the faith to be maintained, the magisterium may be expected to make occasional blunders, as did the Roman authorities who condemned Galileo. In that particular case, Polanyi noted, the authorities had to act without benefit of scientific confirmations of the Copernican theory that were not forthcoming until long after the time of Galileo.³¹

Recognizing the fallibility of civic and scientific authorities, Polanyi argued for the legitimacy of loyal dissent. By the suppression of free debate the totalitarian societies of our time had, in his opinion, hindered the progress of knowledge. Yet he favored the exercise of hierarchical authority to preserve hard-won truth and to keep the market from being flooded with nonsense. Even though he himself had on occasion suffered from the temporary rejection of his own correct theories by leading scientific authorities, he recognized the necessity of such authoritative agencies.³² Transferring these principles to the ecclesiastical realm, one may surmise that Polanyi would be prepared to accept a binding, even though fallible, magisterium.

One might even make a case for an infallible magisterium on Polanyi's principles. He was convinced that, even in the scientific sphere, "heuristic progress is irreversible."³³ Once a valid insight has been achieved, no subsequent discovery can invalidate it. Future theories, though they may unexpectedly modify what is currently held, must conserve the elements of truth already known. Applying this to theology, one may conclude that if dogmas express an authentic grasp of revelation, they would, on Polanyi's principles, be irreversible. An assured grasp of revelation would, of course, lie beyond the specific capacities of human intelligence, but the Church might have the right to hope that she would be visited by higher powers as required by her universal mission.

One of the few religious themes that Polanyi explored in depth is that of worship. Celebration or ritual, he held, is an essential feature of any community. It educates the feelings of the members, draws the members into deeper communion, and thus enhances their life together. "Every ritual act of a group," Polanyi wrote, "is to this extent a reconciliation within the group and a reestablishment of continuity within its own history as a group. It affirms the convivial existence of the group as transcending the individual, both in the present and through times

³¹ *Personal Knowledge* 147.

³² *Science, Faith, and Society* 60-61.

³³ E.g., *Personal Knowledge* 123.

past."³⁴ Religious worship, for Polanyi, had yet an added dimension. Disposing the worshiper to be carried away in contemplation, it is a heuristic performance. The mind, dwelling in the clues afforded by the symbolic texts and gestures (including those which Christians call sacraments), enters into an affective relationship with God, who is fore-known, so to speak, in the passionate longing to contemplate Him. By ritual indwelling the mind achieves an intense moment of vision, enabling it to break out of its previous patterns of apprehension. In such ecstatic experiences innerworldly realities cease to be seen focally in themselves and are perceived only subsidiarily as pointers to the divine or, in Polanyi's bold expression, as "features of God."³⁵ In anguished hope the worshiper looks for a "merciful visitation" of grace in which God will mysteriously manifest Himself as incomprehensible.³⁶

From Polanyi's discussion of worship it would seem to follow that the contemplative, building on this ineffable experience of union, might be empowered to speak with prophetic force in and to the community, calling attention to the ways in which received ideas and practices fall short of the divine reality and lend themselves to distortion. The prophet breaks out of the accepted framework and in this respect resembles the heretic. Yet the two are not the same. The genuine mystic or prophet renews the tradition by a profound personal grasp of the very reality to which the tradition bears witness. The heretic, by contrast, undermines the tradition by failing to abide in the truth to which it attests. Since every heretic grasps an aspect of the truth, and since every prophet suffers from human limitations, the line of demarcation between the prophet and the heretic is sometimes difficult to draw.

THE DOCTRINE OF GOD

Very rarely did Polanyi make direct statements about God, and when he did so he spoke generally from the standpoint of the inquirer rather than that of the convinced believer. He was neither a theologian nor an apologist, but he showed unfailing respect for religious commitment and sought to facilitate it. The most formidable obstacle to religious belief in our time, he held, is the prevalence of the reductionistic, scientific myths which he vehemently strove to discredit.³⁷

Polanyi's ontology, like his view of society, was conspicuously hierarchical.³⁸ He saw the universe as stratified in a series of ascending levels,

³⁴ Ibid. 211.

³⁵ Ibid. 198.

³⁶ Ibid.

³⁷ *Meaning* 188.

³⁸ On the hierarchy of being, see M. Polanyi, *The Study of Man* (Chicago: University of Chicago, 1959) 41-70; M. Polanyi, *Knowing and Being*, ed. Marjorie Grene (Chicago: University of Chicago, 1969) 211-39; *Personal Knowledge* 347-80.

the higher of which comprehends, and yet transcends, all the levels below it. Among these distinct levels are the physicochemical, the biological, the sentient, and the human. Polanyi attacked the mechanists for their tendency to account for what is specifically biotic in terms of the merely mechanical, and opposed the behaviorists for seeking to reduce what is specifically human to the level of the merely instinctual. He, on the contrary, insisted that the higher levels contained organizational principles not present in the lower. Even the machine, he contended, can never be explained exhaustively in terms of its physical parts; for the parts, as such, have no capacity to do separately what they accomplish jointly as a machine, e.g., to pump water or to record human ideas in printed form. Success or failure can be properly attributed to a machine or, in a different way, to a biological organism, but these categories do not logically apply on the physicochemical level, since the higher operative principles are simply not present at that point. In this connection Polanyi profoundly remarked that physical factors can account for the failures of machines and organisms, but not for their successes, which must be explained by superior organizational principles.³⁹

In terms of his nonreductionistic approach, Polanyi rejected the idea of evolution, understood only as a matter of chance mutations and natural selection. In its place he proposed a teleologically oriented doctrine of emergence. Like Teilhard de Chardin, whom he several times cited with approval, he regarded the whole process of emergence as borne by "creative powers inherent in the universe."⁴⁰ Human life was for him the higher manifestation of the immanent drive of the universe to surpass itself. Yet humanity is not sovereign to do as it pleases. The human person is subject to standards that command reverent acknowledgment. All men and women stand "under a firmament of truth and greatness" that they must fear and obey.⁴¹

It is especially in this context that Polanyi raised the question of God. In a characteristic paragraph he wrote:

I have mentioned divinity and the possibility of knowing God. These subjects lie outside my argument. But my conception of knowing opens the way to them. Knowing, as a dynamic force of comprehension, uncovers at each step a new hidden meaning. It reveals a universe of comprehensive entities which represent the meaning of their largely unspecifiable particulars. A universe constructed as an ascending hierarchy of meaning and excellence is very different from the picture of a chance collocation of atoms to which the examination of the universe by explicit modes of inference leads us. The vision of such a hierarchy inevitably

³⁹ *Personal Knowledge* 331-32.

⁴⁰ M. Polanyi, "Science and Religion: Separate Dimensions or Common Ground?" *Philosophy Today* 7 (1963) 4-14, at 10.

⁴¹ *Personal Knowledge* 380; cf. 386.

sweeps on to envisage the meaning of the universe as a whole. Thus natural knowledge expands continuously into knowledge of the supernatural.⁴²

Polanyi showed a certain reluctance to speak directly of God. This reluctance, I suspect, was rooted not so much in his lack of theological expertise as in his vivid perception of the logically peculiar status of God-talk as "nonfocal." In terminology he left largely unexplained, Polanyi said that the acceptance of religion depends on an imaginative or "trans-natural" integration of incompatible clues.⁴³ Such an integration, Polanyi further stated, is not just subjective but universally personal; it points to the ultimate meaning of reality.⁴⁴ Although Polanyi can easily be misunderstood as denying the objective intent of religious language, his aim was rather to call attention to the evocative character of such language. Since it remains to a great extent tacit, religious knowledge relies heavily on symbol and metaphor. It does not deliver a clear concept of God, whom Polanyi often describes as a paradoxical "coincidence of opposites."⁴⁵

I do not find in Polanyi any confident affirmation that God has really acted in history, though he never denies this. Acknowledging that this is what Christians believe, he showed unfailing respect for that belief. More than this, he himself frequently expressed a heartfelt hope that God would respond to human needs, aspirations, and prayers. But what form would such a response take? Could God be viewed as interposing Himself in the universe as though He Himself were a physical agent? As I read Polanyi, he intimated, but did not explicitly assert, another possible mode of divine action which theologians would do well to ponder.

A fundamental principle of Polanyi's thought was that of "boundary control" or, as he sometimes called it, "marginal control." In discussing the stratified levels of being, he stated that the lower levels always leave open certain possibilities that can be actualized in a determinate way by higher principles.⁴⁶ In a machine, e.g., the parts viewed in themselves are governed "from below" by invariant physical and chemical laws which leave themselves open to a variety of possibilities of organization. When functioning conjointly, as a machine, the parts are directed "from above" by extraneous organizational principles that harness the lower processes. A similar dual control obtains in the realm of biology. Above the level of the physicochemical and quasi-mechanical processes at work within them, living organisms have a principle of immanent finality, enabling

⁴² "Faith and Reason" 246.

⁴³ *Meaning* 149-50.

⁴⁴ *Ibid.* 146.

⁴⁵ *Ibid.* 129. As Polanyi remarks (222, n. 16), this term from Nicholas of Cusa was later used by C. J. Jung and by Mircea Eliade.

⁴⁶ *Knowing and Being* 154.

them to use the mechanisms in their bodies for biotic ends. In the human composite the physical and biotic levels are made to serve the still higher purposes of deliberately chosen goals. In each of these instances of boundary control, the higher principle, indwelling and relying on the lower as its subsidiary base, acts in a different dimension to realize an achievement that lies beyond the capacities of the lower. The integrity of the lower is not violated but is a necessary condition for the success of the higher.

An example may clarify these somewhat abstract statements. When I write a letter, the pen, ink, and paper provide the necessary conditions for my communicating information, but they cannot by themselves explain the fact that my letter carries meaning. My physical powers enable me to move the pen if I decide to do so. The mind, however, supplies the meaning and conveys this by imposing a significant sequence on the letters. The mind, according to Polanyi, acts on the body by dwelling in it in such a way that it does not suspend the body's natural modes of activity but directs these to its freely chosen ends. Polanyi suggests, in fact, that the mind acts without exercising any force or transferring any energy of its own.⁴⁷

Although Polanyi does not apply the principle of boundary control to God, I should like to suggest that it might throw light upon the ways in which God is believed to act in the world. Many critics have protested against a supernaturalism that would derogate from the proper autonomy of nature and yet have been unwilling to settle for a deistic naturalism. The idea of boundary control suggests a way out of the apparent dilemma. It indicates how God might be able to shape events unobtrusively, without interference in the normal operation of created causes. God, who is present in every part of His creation, could gently direct mundane causes from within, somewhat as the mind directs the body in which it dwells. The success of God's activity would depend upon, without being determined by, the proper functioning of innerworldly agencies. Breakdowns at the lower levels could explain sin and evil, but higher achievements would be attributable to the divine influence.⁴⁸

Several specific applications of this general principle come to mind. We have already raised the question how new and higher species arise from lower grades of being, as in the case of the first appearance of life on earth or in the origins of the human species. If these cases are not to

⁴⁷ *Personal Knowledge* 403. Coining a term that might have appealed to Polanyi, Rupert Sheldrake advocates "the idea of non-energetic formative causation." See Sheldrake's *A New Science of Life* (Los Angeles: J. P. Tarcher, 1981) 71 and passim. For this reference I am indebted to John F. Haught, *The Cosmic Adventure* (New York: Paulist, 1984) 60-74.

⁴⁸ In *The Cosmic Adventure* 119-37 and 165, Haught makes use of Polanyi's doctrine of boundary control to elucidate the problem of evil.

be attributed to sheer chance, they might well be instances in which lower entities are providentially directed to achieve something that lies beyond their own power to intend.⁴⁹

A second application would be to the vexed question of miracles. God need not be imagined as interposing Himself in the chain of created causes or as violating the laws of physics and chemistry. Rather, He may be envisaged as directing from above the forces that are at hand in the world, making use of the margin of indeterminacy, and thereby fashioning a sign somewhat as does a human person making a significant gesture. The main difference would be that God, unlike the human writer or sign-maker, is not a physical agent.⁵⁰

A third application could be to the doctrine of prophetic or biblical inspiration. In inspiring a human person or book, God might supply a dimension of meaning beyond what the human mind was capable of achieving on its own, so that the words would bear a deeper significance discernible in faith. The human spirit, with its native openness to the transcendent, would seem to offer a privileged locus for the unobtrusive insertion of a higher dynamism that would elevate, without interfering with, the natural processes of the mind.⁵¹

In these pages I have touched on only a few of the possible theological implications of Polanyi's epistemology and ontology. Whether or not my suggested applications are judged sound, they may at least suggest the exceptional interest that Polanyi's system has for the theologian. If I am not mistaken, Polanyi's value for theology lies less in what he explicitly stated about theological questions than in the transfer value of what he had to say about science. It was in the field of science, not theology, that he spoke with special authority. Whether he was correct in his philosophy of science I must leave to others to judge, but as a theologian I am convinced that his speculations in this area are enormously suggestive for theology. A thoroughgoing renewal of theology along the lines indicated by Polanyi could profitably engage the joint efforts of many theologians for a considerable span of years.

Catholic University of America

AVERY DULLES, S.J.

⁴⁹ Compare K. Rahner, *Hominisation* (New York: Herder and Herder, 1965) 50–101.

⁵⁰ Compare Rahner, *Foundations of Christian Faith* 258–60.

⁵¹ Compare the statement of Vatican Council II, in its Constitution on Divine Revelation, *Dei verbum*, no. 11: "In composing the sacred books, God chose men and while employed by Him they made use of their powers and abilities, so that with Him acting in them and through them, they, as true authors, consigned to writing everything and only those things which He wanted" (W. M. Abbott, ed., *The Documents of Vatican II* [New York: America, 1966] 119).