Michael Polanyi was a physical chemist who turned to philosophy in middle age. His philosophical work is sometimes said to fall into the domain of philosophy of science, sometimes into epistemology. Neither characterization is inaccurate but neither really suggest the immense range of interests Polanyi incorporated in his thought. Careful study of Polanyi reveals a surprisingly comprehensive vision. Polanyi's epistemological innovations are articulated in the context of a Lebensphilosophie which includes a vision of the scientific community and the political and economic context in which the scientific community might prosper. Discussion of these topics are linked to broader metaphysical and cosmological discussions in which Polanyi wrestles with questions about the relation between knowing and the emergence of life in the universe. Finally, all of these matters are tied with some of Polanyi's speculations about the range of human inquiry and the different kinds of meaning, scientific, artistic and religious, available to human beings.

This paper tries to pluck out of the broader scheme of Polanyi's thought one small but interesting part, Polanyi's approach to religion in the period of Personal Knowledge, his magnum opus published in 1958. Two sections of this complex work growing out of his Gifford Lectures are especially important. One is entitled "Dwelling In and Breaking Out" (PK, 195-202) and is the final section of Polanyi's lengthy chapter called "Intellectual Passions." The other section, "Religious Doubt" (PK, 279-286), comes in the chapter titled "The Critique of Doubt." These sections are very dense; my modest intention here is to unpack some (but not all) of their central claims in a sensible way. I acknowledge that I am specifically excluding from consideration here the many comments Polanyi made about religion in his final book Meaning, published in 1975. The material in this last book was based upon lectures Polanyi gave in the United States in the late sixties and early seventies. The book was actually pulled together by Polanyi's collaborator, the American philosopher Harry Prosch, in a period when Polanyi's health was declining. In my view, some of the later views published in Meaning do grow out of perspectives on religion developed in the cited sections of Personal Knowledge; but there is a peculiar gap between Personal Knowledge and its sibling born eighteen years later." It is a helpful and interesting exercise to examine the account of religion given by Polanyi at the height of his career.

Citations are in parentheses by title abbreviation (PK) and page number.

See the Hall and Haddox articles in the edition of Zygon (listed below) on Polanyi's ideas about science and religion; both writers analyze this gap and, in general, compare the perspectives of Meaning unfavourably with those of Personal Knowledge. This paper is in some ways quite like the essay Prosch wrote for the Zygon issue; both at least take as their objective the problem of sorting out how Polanyi thought about religion in Personal Knowledge.
Religion as an Articulate System

We owe our mental existence predominantly to works of art, morality, religious worship, scientific theory and other articulate systems which we accept as our dwelling place and as the soil of our mental development (PK, 286).

Polanyi offers this comment at the conclusion to his discussion of religious doubt in Personal Knowledge. Although Polanyi does have a special interest in Christian worship, the broader context suggests that Polanyi means the religious ideas and practices of a community which get focused in worship. The point of his statement then is this: a community's religious ideas and practices constitute an "articulate system" similar to a community's currently prevailing scientific theory, its narratives and governing morality and its accepted modes for artistic expression; all such articulate systems are meaningful human dwelling places which ought to be appreciated since they nurture human mental achievements.

Polanyi makes clear in other sections of Personal Knowledge that what might be called the peculiarly human opportunities and responsibilities in the cosmos are associated with human mental achievements; articulate systems allow human beings to explore the universe from the multiple perspectives in which human inquiry operates in human communities. It is not always clear what Polanyi thinks constitutes an "articulate system." In the quotation above, seemingly different domains of social life (art, morality, religion, science) seem to be recognized as different systems; Polanyi also implies that different cultures with different languages can give birth to fundamentally different articulate systems (PK, 286-292). Sometimes Polanyi seems to recognize different disciplines in the university as somewhat distinct articulate systems; generally, however, Polanyi is also concerned to point out the relationships, among different disciplines (see especially The Study of Man). What seems to be critical to all such "articulate systems" is that they are a realm of public discourse, a domain of social conversation. As such, articulate systems, including religious ideas and practices, serve as the seedbeds in which sprout the intellectual passions that eventually shape individuals who function as responsible inquirers serving self-set standards. By dwelling in articulate systems, human beings assimilate their traditions and become active practitioners embodying the tradition; they become skilled members of historical interpretative communities. In Polanyi's view, the activity of dwelling in a concrete, articulated set

Knowledge. Although I think that Prosch does get many things right, I also think that Richard Gelwick's article in the Zygon issue (which is a reaction to Prosch's criticisms of Gelwick's discussion of Polanyi's approach to religion in The Way of Discovery: An Introduction to the Thought of Michael Polanyi) is a fine statement of how Polanyi thought about the relation of science and religion. I have more affinities with Gelwick's account than with Prosch's, although I would criticise both on some points. I am convinced that it is important to emphasize imagination in Polanyi in a way neither of these commentators do; I do not introduce this discussion in this short paper. In this paper I work through much of the same material in Personal Knowledge which Prosch and Gelwick consider relevant to understanding how Polanyi regards religion. My reading of this material is one that tries to explore the notion of "articulate systems" in a way a bit different than either Gelwick or Prosch do.
of commitments (which is always located within a given articulate system) also forms the foundation for breaking out of this particular mindbodily disposition; this breaking out is a matter that Polanyi’s thought particularly emphasizes. That is, Polanyi suggests humans have a drive to move beyond the status quo, to reinterpret tradition, to discover the unknown. These are the ideas that are developed in the subsection "Dwelling In and Breaking Out" at the end of Polanyi’s chapter entitled "Intellectual Passions;" here Polanyi explores the peculiarities of the movement to break out of religious articulate systems. Before turning to this matter, more needs to said about the general nature of "dwelling in and breaking out."

"Dwelling in and breaking out" is both a phrase which succinctly summarizes Polanyi’s epistemological model and metaphorically symbolizes Polanyi’s view of what human experience in the cosmos has been and should be in the future. In the narrowest epistemological sense of the phrase "dwelling in and breaking out," Polanyi holds that those who wish to know must always locate themselves within an appropriate set of skills and presuppositions ("dwelling in") and make such elements second nature or subsidiary. Only by doing this can a knower attend to or grasp matters which the subsidiaries conjointly make visible or intelligible. Most of the time, Polanyi’s use of the phrase "breaking out" seems to be associated with dramatically transcending moments of integrative insight. Polanyi sees human beings as creatures with curiosity and thirst for understanding; "breaking out" in some senses is a primordial element which Polanyi roots at both physiological and social levels. In the broader, metaphoric sense, the activity of "dwelling in and breaking out" stands for the history and potential of human beings. The scientific discoverer and the emergence of new ideas within the scientific community are exemplars of the personal and communal history and possibilities for human beings. The diligent scientist assimilates habits and ideas embodying the existing scientific tradition; if a scientist draws upon such elements to make a great discovery, the discoverer introduces to social companions an authentically new or more penetrating contact with reality which ultimately reformulates scientific ideas and practice.

In his discussion of "dwelling in and breaking out" at the end of his chapter "Intellectual Passions," Polanyi argues that all types of "articulate frameworks" (PK, 195) can provide a deeply contemplative indwelling (one can and must "live in them"—PK, 196) which lets a person lose or surrender the normal self in a way that brings satisfying insight. In Polanyi’s lexicon, an "articulate framework" sometimes seems to be a particular concrete set of ideas and/or practices which have a certain currency within a specific "articulate system;" sometimes a "framework" seems to be simply a synonym for an "articulate

This is William Poteat's expressive term which points to the way in which Polanyi refuses to separate mind and body as well as the way in which deploying or disposing ourselves is a basic form of human action which is itself always already based upon a more primordial and social being in the world of self and others. See especially Poteat, 16-23.
system." The simplest example of such a "framework" is a particular theory, but Polanyi seems quite willing to regard an artistic style and a particular ritual as frameworks also. Ultimately, Polanyi seems to think humans have an "urge to break through all fixed conceptual frameworks" (PK, 196) into ecstatic vision. In truly deep contemplation of an ecstatic sort, humans beings "become absorbed in the inherent quality of our experience, for its own sake" (PK, 197). This sort of complete participation Polanyi identifies with the contemplative communion of the religious mystic. Polanyi contends that human beings not only seek satisfying contemplative insight achieved with the aid of articulate frameworks (even if they break beyond such a framework); they also crave dissatisfaction, for the human mind is restless. The process of maturation in the human being leads from the formation of the infant's first simple personal framework through a succession of framework demolitions to the present stage of the mature person's acceptance of certain beliefs constituting a current framework. Human beings, creatures who play in adulthood, have a certain desire for tension, according to Polanyi, and the pleasure provided by tensions is uniquely found in ritual experiences. Polanyi regards Christian worship as a ritual experience which is analogous to the mystic's communion. The mystic's religious ecstasy involves a surrender which corresponds to the degree to which the worshipper dwells within the fabric of the religious ritual, which is potentially the highest degree of indwelling that is conceivable. For ritual comprises a sequence of things to be said and gestures to be made which involve the whole body and alert our whole existence (PK, 198).

Although worship resembles the satisfaction of deep contemplation, with its direct participation, it provides also the satisfaction ensuing from tensions:

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 not the dwelling within a great theory of which we enjoy the complete understanding, nor an immersion in the pattern of a musical masterpiece, but the heuristic upsurge which strives to break through the accepted frameworks of thought, guided by the intimations of discoveries still beyond our horizon. Christian worship sustains, as it were, an eternal, never to be consummated hunch: a heuristic vision which is accepted for the sake of its unresolvable tension. It is like an obsession with a problem known to be insoluble, which yet follows, against reason, unswervingly, the heuristic command: 'look at the unknown!' Christianity sedulously fosters, and in a sense permanently satisfies, man's craving for mental dissatisfaction by offering him the comfort of a crucified God (PK, 198 -199).

After setting forth the experience of the worshipper as the penultimate form of indwelling, Polanyi turns to comparisons between worship and the indwelling involved in appreciation of other frameworks rooted in other articulate systems. It is the family resemblances between religious worship and experience with a work of art, mathematical theory and
scientific discovery which seem to fascinate Polanyi. He describes the indwelling required to deeply enjoy the arts as "somewhere between science and worship" (PK, 199). Art, he says, "like mysticism, breaks through the screen of objectivity and draws on our pre-conceptual capacities of contemplative vision" (PK, 199). He notes that works of art can affect human beings more comprehensively than mathematical theorems because words of art are more sensuous (PK, 199). Scientific discovery is possible through the visionary powers of the scientist but these subside after the moment of discovery, religious practices however, seek, again and again, the high visionary moments. Works of art Polanyi sees as probably more akin to human experience in religious frameworks than in science: "But the work of art is more akin to an act of religious devotion in remaining, even in its finished form, an instrument of more active and comprehensive contemplation" (PK, 200). Polanyi speculates about the nature of artistic innovations, especially those of the twentieth century, which he loosely compares to major revolutions in science. He comments upon the way in which kinds of meaning (available only through indwelling) in the frameworks found in arts and mathematics reflect contact with reality:

Artistic beauty is a token of artistic reality, in the same sense in which mathematical beauty is a token of mathematical reality. Its appreciation has universal intent, and bears witness beyond that to the presence of an inexhaustible fund of meaning in it which future centuries may yet elicit. Such is our commitment to indwelling (PK, 201).

Polanyi comes back, in the years after Personal Knowledge, to the set of issues here; his American lectures and final book Meaning, based upon these lectures, work out more carefully his general concern with properly aligning the different kinds of human response possible with different types of articulate frameworks. In Personal Knowledge, it is already clear that different frameworks seem to require a different degree (or perhaps a different kind) of participation; religious frameworks, typified by rituals of Christian worship, seem to be most deeply involving. But it is important not to lose sight of the fact that accreditation of all such frameworks and the specification of the relationships among the variety of frameworks available was what most concerned Polanyi.

Polanyi ends his chapter titled "Intellectual Passions" on just this note. He distinguishes the matter of accrediting a framework from accrediting experience which is clearly rooted in a framework or experience which is only indirectly rooted in a framework:

But we can already distinguish between the accrediting of an articulate framework, be it a theory, a religious ritual or a work of art, and the accrediting of an experience, whether within such a framework or as visionary contemplation (PK, 201).

The significant issue for Polanyi concerns the need for human beings to respect the variety of articulate frameworks and articulate systems; they are the source through which human contact with reality emerges.
The acceptance of different kinds of articulate systems as mental dwelling places is arrived at by a process of gradual appreciation, and all these acceptances depend to some extent on the content of relevant experiences... (PK, 202).

Polanyi claims, however, that certain kinds of articulate systems (such as natural science) have a more specific bearing upon what he ambiguously terms "facts of experience" (PK, 202). What he seems to mean is that an articulate system like that of science (and unlike those of mathematics, art and religion) sanctions processes of verification which are not necessarily appropriate to all other articulate systems. Polanyi contrasts verifications with the process of validation:

It is justifiable, therefore, to speak of the verification of science by experience in a sense which would not apply to other articulate systems. The process by which other systems than science are tested and finally accepted may be called, by contrast, a process of validation (PK, 202).

Polanyi is attempting to distinguish verification and validation in terms of the difference in processes used in an interpretative community to support conversation about realities; extensions of human contact with such realities is, of course, possible only when responsible, skilled personal knowers "dwell in and break out" of frameworks found in articulate systems. Although both verification and validation are concerned with conversation about reals, Polanyi indicates that the degree of personal participation involved in validation is greater than in verification. He suggests that there is a higher level of emotional involvement in validation:

Our personal participation is in general greater in a validation than in a verification. The emotional coefficient of assertion is intensified as we pass from the sciences to the neighbouring domains of thought. But both verification and validation are everywhere an acknowledgment of a commitment: they claim the presence of something real and external to the speaker (PK, 202).

Religion and the Network of Mutually Interpenetrating Articulate Systems

In his chapter-long discussion of religious doubt later in Personal Knowledge, Polanyi comes back to the ideas developed above about religion as an articulate system. Polanyi proposes, in this section, that he will develop a conception of

religious worship as an heuristic vision and align religion in turn also with great intellectual systems, such as mathematics, fiction and the fine arts, which are validated by becoming happy dwelling places of the human mind (PK, 280).

Polanyi summarizes his earlier account of Christian faith as "a passionate heuristic impulse which has no prospect of consummation" (PK, 280). Such an impulse is most apparent in worship which is implicitly an inquiry or search for God:
The Christian enquiry is worship. The words of prayer and confession, the actions of the ritual, the lesson, the sermon, the church itself, are the clues of the worshipper's striving towards God. They guide his feelings of contrition and gratitude and his craving for the divine presence, while keeping him safe from distracting thoughts (PK, 281).

All the elements of a religious service, Polanyi seems to think, constitute a framework which in a sense points to God. He contends that the framework itself can induce comprehension in persons who are properly receptive but this depends in part on the non-religious significance of elements of the framework. That is, a truly receptive person is pulled already, by what seems to be the everyday meaning of certain clues constituting the framework, toward some sort of integration that moves to a higher level of insight:

The power of a framework composed of words and gestures to elicit its own religious comprehension in a receptive person will depend partly on the non-religious significance of its elements (PK, 282).

It is certainly far from clear as to exactly what Polanyi means in attributing to a religious framework this sort of power. He seems to be intent upon shifting away from a subject centered idiom for describing the dynamics of worship; that is, the worshipper does not so much create as discover whatever is grasped by such indwelling aimed at breaking out. Polanyi also seems to be quite influenced by Tillich (whom he approvingly cites; PK, 283) in that he wants to show that religious and non-religious knowledge can be related; they may be complementary or they may work at cross purposes. Polanyi points out, on one hand, that historical evidence might lend credence to some biblical claim; on the other hand, modern biblical study and science "weakened or destroyed the extra-religious plausibility of many Biblical narratives and discredited the supposed magical powers of some Christian ritual"...(PK, 282). What Polanyi seems to be most interested in clarifying, however, is that heuristic visions, whether they are within the articulate system of religion, art or mathematics, transpose or transform meaning current in other articulate systems:

This relation of factual clues to a heuristic vision is similar to the relation of factual experience to mathematics and to works of art. The analogy brings religious faith into line with these great articulate systems which are also based on experience, but which the mind can yet inhabit without asserting any definite empirical facts. External experience is indispensable both to mathematics and art, as their theme, but to a person prepared to inhabit their framework, mathematics or art convey their own internal thought, and it is for the sake of this internal experience that his mind accepts their framework as its dwelling place (PK, 283).

Polanyi argues that each articulate system has its own context of meaning; religion discloses its own field of meaning by recasting non-religious meaning.
Religion stands in a similar relation to non-religious experience. Secular experiences are its raw material: religion uses such experience as its theme for building up its own universe. The universe of every great articulate system is constructed by elaborating and transmuting one particular aspect of anterior experience: the Christian faith elaborates and renders effective the supernatural aspect of anterior experience in terms of its own internal experience. The convert enters into the articulated framework of worship and doctrine by surrendering to the religious ecstasy which their system evokes and accredits thereby its validity. This is again analogous to the process of validation by which men learn to enjoy and pursue mathematics or to contemplate with pleasure - and sometimes even produce - works of art (PK, 283-284).

In the final analysis, what Polanyi seems to be arguing for in *Personal Knowledge* is a vision of meaning in which articulate systems draw on each other but attend to realities which are unique to each respective system:

I have shown how natural science, mathematics and technology mutually interpenetrate each other. All the arts are similarly interwoven; while the arts and the methods of science penetrate each other in the domain of the humanities. Religion has even more comprehensive affinities: it can transpose all intellectual experiences into its own universe, and has also served, in reverse, most other intellectual systems as their theme. The relation of Christianity to natural experience, in which we are interested here, is but one thread in this network of mutual penetrations (PK, 284).

What Polanyi seems to be working out in his discussion of religion as an articulate system to be seen in conjunction with other articulate systems is a set of ideas akin to what is more conventionally regarded as a theory of analogical meaning.
Works Cited


