

A Breakfast in the Tacit Tradition: Preface 3

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A Personal Prelude

Polanyi's most important book is titled *Personal Knowledge*⁵; it was nothing more than that title, which brought me originally to study Polanyi. I was a graduate student then, in 1972, at the University of Iowa. Polanyi's name was beginning to show up in the footnotes, but rarely in the texts, of rhetorical and composition theory. I said once before I wrote my study that one way to meet a dissertation requirement is to extract a rhetorical theory from some unsuspecting philosopher. But there was more to it than that, of course, and Polanyi's title suggests what.

I wanted to be a writing teacher, and I had entered a doctoral program to begin preparing myself to be one. It seemed to me, then, that the writing teachers I knew were divided into two camps, which looked at their tasks so differently that it was almost impossible for the two camps to communicate. On the one hand, the "person" people were so concerned with their students' individual growth that "knowledge" rarely intruded in their classrooms. Their students' writing was so mushy, who would care to read it? On the other hand, the "knowledge" people so crammed their classes with information and rules that the "persons" who were their students must have felt overwhelmed and bewildered, if they allowed themselves to be present at all. Their students' writing was so identical, who would care to read it? I found myself with friends and allegiances in both camps. "Person" and "knowledge" seemed such antithetical terms, could it be that all of us were misconstruing the terms, perhaps in common ways? Could it be that Polanyi, by yoking those terms together, would offer us ways better to understand each in the light of the other? Could it perhaps be that those terms really do *belong* together? In the years since, I

have seen nothing in my classrooms, in our profession, or in our culture to diminish the importance of those questions, and nothing in Polanyi's work to quell the faith which they imply.

I must say that I have found something like the same impasse in rhetorical theory. It shows up in these two ways: sooner or later, most rhetoricians begin assuming that their theory applies only to "other people"; they tacitly declare themselves exempt from their own rhetoric. Second, they demarcate rhetoric by contrasting it to an image of knowledge that is certain and, therefore, superior to rhetoric. The only exceptions that I know well enough to suggest, are Walter Weimer, Kenneth Burke, and in his less timid (and more recent) moments, Henry Johnstone, and, strangely enough, Plato. And Polanyi is an exception.

Douglas Ehninger closed one of his last articles by asking, "Will it be possible to find a single epistemic base for the [new] rhetoric. . .? On this question even my rashness deserts me and I defer to those who are wiser or less timid." Ehninger had recently signed my study, and I like to imagine him writing those sentences with a mischievous smile.⁶ Polanyi, I think, may offer such an epistemic base. Those seas remain largely uncharted, though the essays of this volume comprise one set of beginnings.

None of my professors at Iowa then knew Polanyi, though I persuaded Seigmar Muehl, a man of the Renaissance who also happens to be a professor of education, to study him. And Richard Lloyd-Jones, my dissertation director, spent a summer vacation being driven across the Southwest while reading *Personal Knowledge*. With my doctorate in hand, I told Lloyd-Jones I had been tempted to dedicate the study to him, as someone whose life demonstrates "the heuristic efficacy of whimsicality." He saw that as a compliment; I hope he still does.

Largely because I needed criticism, I sent copies of the dissertation draft to a number of students of Polanyi's thought and to Polanyi himself. Thus, I entered a rich, convivial community of persons, from a wide range of disciplines, who continue to offer personal support and professional guidance. A list of their names would be incomplete and misleading; jointly, their continuing presence persuades me of the reality of important questions and helps mitigate the loneliness of scholarship. I met Polanyi only twice, though we corresponded throughout my work. I knew him as a warm and generous man; as I began my study, he repeatedly cautioned me, "My work is not accepted everywhere. I don't want you to get into trouble on my account." I assured him that would not be a difficulty at Iowa, but he seemed especially assured by my comment that I had already found myself having some ideas similar to his own. "Good. That is very important," he replied.

A final personal reflection is also a warning to others: I thought that the dissertation would be the end of something for me. It was instead a beginning—like most dissertations perhaps, not a very good one. Not that I have since gotten much beyond a beginning: the demands of university life, the healthy enticements of personal life, as well as a continuing need to give expositions of Polanyi's thought (you find an example below) have all seen to that. Thus, I find it especially gratifying to publish these articles, which do go beyond expository beginnings. There is much in Polanyi that I

do not adequately understand, and I have not yet discovered the limitations of his thought. But my warning is this: reading Polanyi has changed my way of seeing things; I cannot decree an end to that new way of seeing. Reading Polanyi can be reassuring. But to read him and not be dis comforted as well, is to miss the point. Polanyi's work can seem simple, but it is no simpler than the problems he sought to address. As rhetorical theorists, composition researchers, or teachers of writing, we will not find in Polanyi answers to our questions. But he does offer us new and promising ways to pose our questions and to address the concerns which call us.

A Shape in Polanyi's Work

Michael Polanyi was not a rhetorician. Born in Hungary in 1891, he became a medical doctor, then an active and prolific research chemist, then an economist and, finally, until his death in 1976, a philosopher.⁷ Polanyi was a philosopher not by academic training or as an avocation. For him, philosophy was a personal calling.

Stated in the most general possible way, while an active research scientist in pre-World War II Germany and then in England, Polanyi witnessed and combatted threats to freedom—in science, as well as other dimensions of human culture. Those threats were most thoroughly apparent under ideological regimes, and he traced the power of contemporary ideologies to their fusion of inconsistencies—a boundless passion for social improvement, and an "objectivist" view, derived from an image of science, of knowledge as totally explicit, formal, and impersonal. Such a view of knowledge provides no place for the informal work of scientific communities; Polanyi defended the autonomy of scientific communities, even as he witnessed the purging of communities of scientists, for example under Stalinist Communism. He argued that irreducibly informal actions within such communities are essential to scientific work itself. Polanyi had seen the objectivist view, of knowledge as totally explicit, lead to disastrous consequences for work in the sciences and elsewhere; he came to see that it also gives an incomplete picture of human knowing: it cannot account for knowledge's coming into being. Polanyi's epistemology of the tacit begins by taking most seriously acts of inquiry and discovery. But he believed that in the tacit, he was exploring a dimension which undergirds all human acts of comprehension, reunites the sciences with other kinds of knowing, and views human action as responsible, risk-laden, and liberating.

Of the articles which follow, Harry Prosch characterizes Polanyi's understanding of communities; James Reither gives a clear orientation to his epistemology; and Loyal Rue depicts the ontology which is closely linked to his epistemology. You may find these articles useful for their expositions, as well as their extensions, of Polanyi's thought. My own exposition here, a longer one than I would like, suggests between the various dimensions of Polanyi's work some connections which should interest rhetoricians. Polanyi writes of his youth, before World War I:

My remembrance of these September days 60 years ago, when I entered the University of Budapest, shows me an almost forgotten past of peace, of bold intellectual and artistic enterprise and of continuous progress towards liberal ideals.⁸

That image was shattered—in wars, but more profoundly by the radical instabilities Polanyi finds in the modern mind, instabilities which have given twentieth century ideologies their unprecedented persuasive powers.

Polanyi traces these instabilities to what he calls a "dynamo-objective coupling," a fusion of inconsistencies: on the one hand, boundless "dynamic" aspirations for social perfection; on the other, an "objectivist" view of knowledge, which cannot acknowledge moral motives to exist. Such a coupling leaves the modern mind afflicted by self-doubt and accounts for "moral inversions," in which persons assert their "intellectual honesty" by declaring themselves free of such "hypocritical" ideals as truth or justice. Ideologies such as communism, which claim a scientific basis, enable "the modern mind. . . to indulge its moral passions in terms which also satisfy its passion for ruthless objectivity."⁹ The very internal inconsistency gives contemporary ideologies their tremendous powers of persuasion and refutation: any objection on moral grounds is brushed aside as unscientific; while the moral passions which inform the ideology dismiss any challenge of the ideology's presumed scientific status.

Polanyi writes:

I first met questions of philosophy when I came up against the Soviet ideology under Stalin [in the 1930's] which denied justification to the pursuit of science. . . . I was struck by the fact that this denial of the very existence of independent scientific thought came from a socialist theory which derived its tremendous persuasive power from its claim to scientific certainty. The scientific outlook appeared to have produced a mechanical conception of man and history in which there is no place for science itself.¹⁰

Thus "scientific outlook," which Polanyi found a misleading picture of scientific practice, was the culmination of an "objectivist" view of knowledge which we will find all too familiar. Within this view, what is true is what cannot be doubted. Only observable facts are given status as real; even scientific theories are merely convenient summaries of past observations, to be overturned immediately in the light of conflicting observations. Objectivist methods presumably are rigorous; they consist of impersonal, detached observation and logical (or mathematical) operations performed on the results of those observations. All other sorts of statements, including statements of opinion, are essentially arbitrary and literally non-sensical. Objectivism is a stance of explicitness, impersonality, and demonstration.

Such a view implies that communities of scientists are unnecessary and, indeed, inconceivable—inconceivable because the "convivial passions" and commitments to truth that link people together are not objectively observable; unnecessary, because methodological rigor presumably guarantees the certainty of findings.

Polanyi argues that science actually proceeds quite differently. Far-flung and overlapping communities of scientists are essential to scientific progress. These communities, of people linked by their similar beliefs about their subject matter, operate informally but authoritatively. Within them, not all members and not all putative evidence counts equally.

Communities train new members, in ways which would not be necessary if methodology were rigorously explicit; they dismiss some claims, no matter how well documented, on grounds of implausibility; they give audience to other claims and, if the claims are persuasive, seek confirming evidence for them; they point the directions for future promising problems, on grounds that they could not exhaustively articulate or formally "prove." In sum, a community of scientists is a culture of persons holding similar beliefs—so numerous and so rich that no member could begin to articulate them all—in terms of which work is undertaken. A community provides a forum for responsible judgment, necessary for original advances in knowledge.

Commenting on his understanding of scientific communities, Polanyi writes, "In surveying the places where human knowledge rests upon a belief, I have hit upon the fact that this fiduciary element is intrinsic to the tacit component of knowledge."¹¹ Just as objectivism cannot countenance communities, it cannot give any account of discoveries. Already foreshadowed in his understanding of communities, Polanyi's epistemology of the tacit, which Marjorie Grene calls "grounds for a revolution in philosophy"¹² is thoroughly heuristic. It is grounded most firmly in this reality, that persons discover problems and seek to resolve them.

If the only alternative to certain knowledge were ignorance, there could be no direction from the one to the other, only blind trial and error. Instead, Polanyi says, a problem is something I know in some senses but not in others. If I had no knowledge, I would not yet perceive a problem; if my knowledge were complete, I would have a solution rather than a problem. We know, Polanyi says, in two quite different ways: we can know comprehensive entities which we focally grasp, and we know myriads of clues which point vaguely to such entities. To know a problem is to know a cluster of clues, without yet having grasped their joint significance.

Such, in brief, is the epistemology of tacit integrations. In any act of knowing, I attend *from* clues to the entity on which they bear. The example of visual perception helps clarify Polanyi's epistemology, while its extension to acts of discovery introduces a number of its important implications.

In perceiving an object, I strive to make out what is really there. In so doing, I disregard some potential clues while making use of innumerable others, within my body and beyond it, which I can by no means exhaustively specify. Furthermore, to attempt to specify them would be to attend *to* rather than *from* them, destroying at least temporarily their function as clues. Instead I rely on them tacitly. I rely on my body as a generally reliable guide to reality; I accredit myself as a generally competent knower, though in so doing I risk the possibility that a perception may be illusory. A coherent perception is never merely the equivalent of the clues which point toward it. It is by interpretive effort that I bridge the gap which separates clues from coherence. And clues themselves look different to me, once I have formed a coherent perception from them. Once I have solved a perceptual puzzle, for

example, I see it differently. I am committed irreversibly to the emergent coherence; I cannot choose to "unsolve" the puzzle.

Knowing, even in the case of perception, is revealed to be an achievement, a purposeful and skilled activity which demands effort and risks failure. It is carried out by persons on grounds they accept a-critically and cannot fully specify. If the ideal of impersonal demonstration were taken strictly, no knowledge could meet its rigorous specifications.

I have said that I use my body tacitly, as a guide to reality. In Polanyi's language, I "indwell" my body, accepting it a-critically as a generally reliable guide. Brief attention to the integration of other tools will extend the important concept of "indwelling" and provide a necessary link to Polanyi's discussion of discovery.

To use a tool is to perform a skilled act, and skills must be learned. When one initially encounters a tool – a probe, say – his attention is focused upon it, and it is useless to him. Through practice, he must develop the skill to use the probe, rendering it subsidiary, an extension of himself. The tools of a discipline encompass not only physical instruments such as probes, but the language currently used, the theories currently accepted, within the discipline. All these the aspirant must teach himself to indwell, rendering them subsidiaries, extensions of himself, as he learns to see reality from the point of view which the intellectual framework of his discipline can afford him. This arduous process of coming to indwell is the purpose of an education within any discipline.

While routine work – in the hard sciences, say – may seem to proceed according to strictly specified operations, this is by no means an adequate picture of a striking achievement in any field. The perception of a genuine problem is open only to persons who indwell the discipline's framework, making it part of themselves as a set of sensitive and generally reliable clues toward a real coherence as yet ungrasped. Existing formulations point toward a problem, providing clues to its solution. But a genuine problem is problematic precisely because it resists existing formulations. Thus, to perceive and pursue a genuine problem is the highest and most demanding calling that a member of any discipline can undertake.

The search for a discovery is highly skilled, in ways it would not need to be if methodology were utterly rigorous, precise, and explicit. Guided by his heuristic passion the scientist, say, pours himself into his search, committing his time, energy, and intellectual efforts, striving with no guarantee of success to see what no one has seen before. The search is hazardous. At each step of the way he guides his own activities, relying on an embodied interpretive framework which he has neither time, skill, nor attention to replicate, deciding on grounds he cannot fully specify to follow certain leads and ignore others, thus accrediting as generally reliable his own powers of thought and judgment which he cannot exhaustively specify or formally prove. Because his activities are thus grounded in tacit processes, he risks choosing a problem he will be unable to solve, and he risks being mistaken in thinking he has achieved a discovery.

Furthermore, recall that one's solution of even a perceptual puzzle changes, irreversibly, his view of the clues which point to the solution. To

solve a problem is to change, however slightly, the framework which pointed toward the problem but left it problematic, a framework the scientist has rendered part of himself. The discovery

changes the world as we see it, by deepening our understanding of it. The change is irrevocable. . . . Having made a discovery, I shall never see the world as before. . . . I have made myself into a person seeing and thinking differently. I have crossed a gap, the heuristic gap which lies between problem and discovery.¹³

To engage in inquiry is necessarily to set standards for myself and to risk an existential change, a change realized to the extent that the heuristic effort seems successful.

Because inquiry is hazardous, communities of peers exist to seek out promising problems and to judge preferred discoveries. If granted an audience, a scientist appeals to tacitly shared scientific opinion and belief which, because it is shaped and reshaped through time, Polanyi calls a "tradition" providing "the common ground between himself and his opponents."¹⁴

A scientific tradition seeks its own renewal. "Scientific tradition enforces its teachings in general, for the very purpose of cultivating their subversion in particular."¹⁵ The inquirer cannot convince his peers of his discovery by strictly formal argument within a shared framework, a framework which had left the problem problematic. Instead "revis[ing] and renew[ing] by pioneer achievements the very standards by which his work is to be judged,"¹⁶ he must appeal "against [scientific opinion as it is] to scientific opinion as he thinks it *ought to be*."¹⁷ He must, in short, seek to *persuade* his peers:

Like the heuristic passion from which it flows, the *persuasive passion* too finds itself facing a logical gap. . . . [The discoverer's] persuasive passion spurs him now to cross this gap by converting everybody to his way of seeing things, even as his heuristic passion has spurred him to cross the heuristic gap which separated him from discovery.¹⁸

As audience, the community must decide whether to be persuaded. And it must decide in the absence of logically compelling proof, partly so that appropriate verification of the discovery may eventually be uncovered. To listen sympathetically to another's argument is to submit oneself to risk, in the same senses that an inquirer submits to risk:

Proponents of a new system can convince their audience only by first winning their intellectual sympathy for a doctrine they have not yet grasped. Those who listen sympathetically will discover for themselves what they would otherwise never have understood. Such an acceptance is a heuristic process, a self-modifying act, and to this extent a conversion.¹⁹

A person who becomes a sympathetic audience risks being misled. He also risks the existential change implied in seeing things anew. It is hardly too much to say that, for Polanyi, communities are essential, even in the sciences, because persuasion is essential to fundamental advances, in the sciences as elsewhere.

"All knowledge is tacit or is rooted in tacit knowledge." The epistemological reform announced by that maxim produces a significant shift in the noetic landscape. It does not undermine the operations of objective observation and formal inference, when these are functioning within a context of tacit integrations. But it insists that the explicitness,

rigor, and impersonality of any critical methodology gives us only a partial picture, at best, of any act of knowing. Knowing is also an achievement, demanding impassioned efforts and giving no formal guarantee of success. It is rooted in the knower's a-critical acceptance of his own authority and that of his culture, the traditional opinions which point toward problems and afford clues to their solution, a matrix which is part of himself. As Jerry Gill has said, "One must have a 'place to stand' — to attend from — in order to be able to attend to anything at all."²⁰ As man strives for ever more comprehensive meanings, the epistemology of tacit inference accredits his indefinable powers of thought and judgment. In so doing, it accredits man with the powers to reach decisions which, while not apodictic, are responsible.

No knowledge is entirely focal or totally explicit. Instead, "all thought dwells in its subsidiaries,"²¹ which the knower necessarily has tacitly embodied through his personal participation in his knowledge. Thus, the epistemology allows for gradations of explicitness and clarity of knowledge. Furthermore, the epistemology is not reductive; it does not reduce acts of knowing or objects of knowledge to those only which may seem obtainable through the presumably "objective" and "impersonal" methods of the hard sciences and formal demonstration.

Polanyi recognizes that some entities are more "comprehensive" than others: reductionism is hardly a problem in the study of chemistry; it often is, in the study of man. A functioning clock or other machine, for example, is not reducible to the chemicals or the physical properties of its materials, though these materials are required for the machine to function. A living animal is not reducible to the machine-like structures of its body in order to live. In the act of knowing, subsidiaries inform but do not entail emergent coherences. In things known, subordinate levels inform emergent entities; these entities are not reducible to the subordinate levels which inform them, though operations at a subordinate level can cause the emergent entity to fail: a chemical imbalance can cause an animal to die, but that fact does not reduce the animal's life to the level of chemistry.

Man's ethical commitments, including those required for a search for truth, are irreducible to his appetitive and essentially selfish drives, though these drives are part of his existence. In fact, ethical commitments, along with art, metaphor, and religion, represent for Polanyi the highest, most comprehensive level, one that is distinctive in its mode of operation and its importance for humans. At this level, knowledge is least demonstrable, for indwelling is most thorough. In fact, here integrations are *transnatural*, for they involve us wholly in imaginative attempts to reconcile incompatibles which, nonetheless, remain incompatibles and which, therefore, require our continued imaginative participation in ways that natural integrations, once achieved, do not. Thus for example, the inconsistencies between the apparent representation and the frame of a painting, the stage and the action of a drama, the terms of an engaging metaphor, which draw us into works of art; or Christianity's injunction to perfection, and its doctrine of Original Sin; or our ethical ideals and our practice, which always falls short of them.²²

Here, it may be, Polanyi comes full circle, suggesting an even deeper understanding of the crisis which called him to philosophy. The circle of his thought assures us that there will always be inquiries to be undertaken, calling us to responsible human action. The from-to structure of tacit knowing reveals that all acts of knowing are rooted in unspecified existential commitment. Though all knowing exhibits this structure, the required commitment deepens, as we seek to know entities existing at ever higher ontological levels. The theory of personal knowledge thus links the "I-it" character of accepted knowledge in the hard sciences with the "I-Thou" character of inquiry and of engagement between co-equal humans, operating under a "firmament" of standards which, though we construct them, we acknowledge to be real by our submission to them and our attempts, always incomplete, to achieve them.

Polanyi's philosophy, it seems to me, is "of a piece," its varying dimensions supporting and deepening each other. Still, these dimensions can be seen as reasonably distinct: a critique of contemporary ideologies, including a distinctive view of man's moral passions and of the epistemological assumptions underlying those ideologies; an understanding of communities of inquirers; the epistemology of tacit integrations; an ontology of hierarchic levels; and a view of a man's distinctive "transnatural" achievements and hazards in art, religion, and ethics. Polanyi's later works tend to deepen and extend his earlier efforts; thus, it is not possible merely to relegate the items I have listed to his various philosophic titles. However his earliest works, *Science, Faith, and Society* and *The Logic of Liberty* are concerned primarily with a critique of ideologies and an affirmation of the communal setting of free inquiry. *Personal Knowledge*, his most extensive work, provides a detailed critique of objectivist assumptions and arguments showing that personal knowledge is not subjectivism (and thereby justifying the holding of dubitable beliefs) as well as a discursive orientation to tacit epistemology. *The Study of Man* and especially *The Tacit Dimension* are much briefer books, presenting the epistemology of tacit knowing quite succinctly. They are good introductions to Polanyi's thought, though on first reading one may find their arguments so truncated that important points are unclear or unpersuasive. *Knowing and Being* is an excellent and readable collection of Polanyi's articles, illustrating the range of his thought as it had developed to that point; its editor, Marjorie Grene, is one of Polanyi's ablest commentators, and her introduction is a valuable guide to his thought. *Scientific Thought and Social Reality*²³ is a collection of articles linking conceptions of science and their cultural consequences. Finally *Meaning*, Polanyi's last book, extends his thought to the realms of art, myth, and religion, while continuing to deepen his earlier insights.

*Intellect and Hope*²⁴ is a collection of distinguished articles probing Polanyi's significance in a wide range of contexts; it also contains a bibliography of his philosophical works, including unpublished papers, into 1968. Richard Gelwick's recent book, *The Way of Discovery*²⁵ is a noteworthy summary of Polanyi's work; it is readable, reliable (though it does not seek to be critical), readily available, and it offers valuable

guidance to some other thinkers who are using Polanyi significantly. Harry Prosch's *The Genesis of Twentieth-Century Philosophy*²⁶ is good background reading to bring to Polanyi. Finally, Marjorie Grene's *The Knower and The Known*, while not a summary of Polanyi, is grounded thoroughly in his thought, using it to shed new light on the historical and contemporary problems central to epistemology. As she says, "The conceptual reform in which we are now engaged must restore our speech about the world to intelligible discourse and the world it aims at describing to significant and coherent form."²⁷

It is also my pleasure to mention two societies of persons from a wide range of disciplines who have interests in Polanyi:

The Polanyi Society
Dr. Richard Gelwick
Stephens College
Columbia, MO 65201

Covivium
Miss Joan Crewdson
12 Cunliffe Close
Oxford, OX2 7BL
England

Both societies have generously published announcements and other information about this issue of *PRE/TEXT*. Without my participation in these societies, the work I have done with Polanyi would have been less rewarding and more limited than it has been. Without their support of this *PRE/TEXT* issue, it could not have been what it is.

Re-Sounding Rhetoric with Polanyi

Rhetoric is an intersection of concerns, in search of a discipline. Perhaps that has always been the case; certainly it is true now. When, in the *Gorgias*, Plato's Socrates objects to rhetoric, one dimension of his charge is definitional; rhetoric is not sufficiently disciplined to satisfy him. Aristotle, whose definition of rhetoric focuses on a sort of discovery, goes on to say that "the duty of rhetoric is to deal with such matters as we deliberate on without arts or systems to guide us."²⁸

What sort of "art" then is rhetoric? There are any number of reductive definitions, each perhaps useful in its own context, to which the following does not obviously apply. The ancients consistently insist that rhetoric is an art to be acquired through practice and imitation, more than through an explicit mastery of doctrine. Cicero believes, for example, that rhetorical doctrine consists of maxims, significant only to those who have mastered and dwell within them.²⁹ Many of those maxims find their first formulation in Aristotle, for whom rhetoric is bound up with human agency, with doing, more than (among his divisions) with knowing or with making. The meanings of those maxims have shifted instructively, in various times and places, and are by no means definitively given in Aristotle himself. But for Aristotle, as for the subsequent tradition, rhetorical discourse properly

engages not just one mode of proof but three: ethos and pathos, as well as logos. It encompasses the character of the speaker and the emotions in the situation, as well as the subject matter. Rhetorical argument is informal and hazardous. Rhetorical action comes into being because of some problem, some exigency; classical doctrines of invention characteristically begin with a typology of problems under *status* doctrine, already incipient in Aristotle. Rhetorical problems arise, in some sense, within a community. That much is clear in Aristotle's central but slippery concept, the enthymeme; in this form characteristic of rhetorical argument, the speaker's premises are values, beliefs, opinions so commonly shared that they often can and should remain unspoken. Rhetorical action arises within a specific situation, a particular time and place, and for Isocrates "fitness for the occasion" is both a quality which cannot be produced by rules and the highest excellence which a speaker can achieve.³⁰

So Isocrates, who has been called the "Father of Humanism,"³¹ argues that it is man's powers of persuasion which make him distinctively human. Allen Tate, though certainly no great contributor to rhetorical study, nonetheless writes, "The true rationale of humanistic study is now what it has always been, even though now it is not only in decay, but dead. I allude to the arts of rhetoric."³² Richard Weaver laments that our age has
 no adequate theory of man. Lacking such a theory, [it] of course cannot find a place for rhetoric, which is the most humanistic of all the disciplines. Rhetoric speaks to man in his whole being and out of his whole past and with reference to values which only a human being can intuit.³³

Tait's obituary is premature, and Weaver's lament suggests why. Today we hunger for meaning. And we sense that we might achieve sustenance through our participations within and understandings of rhetorical action. After several centuries of comparative neglect, rhetoric is being reborn as an area for serious study; so is writing instruction. In both cases, I submit, our motive finally is a hunger for significance and an intuition about how that hunger might be fed.

Even to ask what fully explicit shape our understandings of rhetoric might eventually assume is, I believe, to misunderstand the task. But the kinships between Polanyi's thought and traditional rhetorical theory provide ample warrant for the potential significance which rhetoricians and theorists of writing are beginning to suggest in his work.

In her essay "The Tacit Tradition,"³⁴ Janet Emig places Polanyi among those exerting a profound influence within the new discipline of writing research. She points to the value of passionate commitment, rather than slavish objectivity, on the part of writing researchers — and writers. As she says elsewhere,³⁵ "Successful learning is also engaged, committed, personal learning," and she suggests that inappropriate reversals of from-to relationships can help us understand dysfunctions in writing.³⁶ Mina Shaughnessy notes that skillful performers follow rules without being able to identify them as such, and she points out the importance (and the difficulty) of identifying such skills.³⁷

For James Britton, indwelling shows that teachers should respond to students' writing as readers rather than only as critics.³⁸ He suggests that subsidiary-focal distinctions may vary in reading different types of discourse,³⁹ that tacit knowledge reveals the importance of incubation and

of self-reflection in the writing process,⁴⁰ and that it helps us understand "shaping at the point of utterance," the spontaneous inventiveness in which language becomes subject to a controlling purpose.⁴¹

In an important dissertation, Louise W. Phelps⁴² invokes subsidiary-focal distinctions to analyze the interpretation of emerging structure at various points within acts of writing, reading, and teacher intervention. Phelps points out that the teacher-reader performs acts of interpretation that are personal, risky, and fundamentally ethical, necessarily indwelling some of the writer's systems in order to understand his text, in which coherent meaning exists as a potential. David Holbrook, studying English education in Australia,⁴³ shows teachers (and students) working effectively with tacit dimensions of knowing, yet often undercutting their own efforts and disavowing their own abilities because of their philosophical presumption that the tacit cannot exist. Elsewhere Holbrook⁴⁴ bases a critique of modern poetry in Polanyi's understandings of nihilism and moral inversion.

A poet herself, Elizabeth Sewell takes poetry seriously, as an instrument of knowledge and research. Among the mentors for her equally biological and poetic "postlogical thinking" are Coleridge, Vico, and Polanyi, a personal friend to whom *The Orphic Voice* is dedicated. "Every word or group of words," she says, "is at once a meaning, a history, and an occasion of activity in the mind. . . . The active participation of the user of the language is part of the nature of language itself."⁴⁵ Those who sense the limits of abstract inventional schemata should read her work.

Harry S. Broudy is not directly concerned with writing, but he has paid the most sustained attention to Polanyi's implications for pedagogy generally.⁴⁶ Broudy is chiefly interested in the sort of liberal or general education which can prepare persons to function responsibly in a democracy. Within this context, knowledge functions in terms of association and interpretation; we think *with* school learnings, not *of* them, and we may well be unable to recall explicitly the learned information and concepts which nonetheless inform our judgments. In any subject, students' discourse reveals the *interpretative* uses they are making of the material learned. Broudy suggests a program of research to test persons' tacit knowledge;⁴⁷ it would involve their oral (or presumably written) interpretive acts. Thus in effect Broudy suggests a rationale for writing across the curriculum as a critically important strategy of evaluation and, I think, instruction.

Researchers of writing seem disposed to take Polanyi's epistemology seriously; still, many of the points I have noted are little more than hints and suggestions in passing. The central work remains to be done. Three concerns strike me as especially pressing and promising. First, Polanyi should help us more adequately understand and extend Britton's contention that all writing arises from self expression. At the same time, he should help us guard against the potential excesses of an expressive emphasis. Polanyi's is not a philosophy of self-indulgence; the "I" who counts is tacit. With respect to Kinneavy,⁴⁸ the varying relationship between subsidiary and focal might provide some connections between the various kinds of discourse in his typology. Second, as researchers have

already hinted, Polanyi should help us better understand processes of composing generally, and their differences in the various kinds of writing. Finally, Richard Young is fond of tracing the impasses of the "current-traditional paradigm" to "vitalist" assumptions.⁴⁹ Yet the texts written within that paradigm seem thoroughly mechanistic. Does Polanyi's analysis of ideologies suggest that "vitalism" and "mechanism," though contradictory, reinforce each other? Does Polanyi help explain the stability of the paradigm they jointly constitute?

Methodologists of rhetorical and communication theory have invoked Polanyi in seeking to tap the explanatory power of images,⁵⁰ have suggested that Polanyi is coherent with a process⁵¹ or constructivist⁵² orientation, and have appealed to him justifying both experimental and humanistic orientations in research.⁵³

From rhetorical theorists, Polanyi has received attention that is more detailed but also more tidily circumscribed than from researchers on writing. Perhaps understandably, rhetoricians have been drawn to his understanding of communities and his critique of doubt. Michael A. Overington⁵⁴ appeals extensively to him in constructing a model for the study of discourse's place within scientific communities. In Polanyi's concept of "conviviality" Robert W. Norton⁵⁵ finds encouragement to study the rhetorical acts which induce communal affiliations and those grounded in such affiliations.

"Polanyi's epistemology should be of the greatest interest to rhetoricians" writes Robert L. Scott.⁵⁶ So far, it has not been. One exception is Sara Leopold,⁵⁷ who looks to subsidiary/focal relationships as a way to render topics sufficiently general to be manageable, sufficiently specific to be useful, at various stages in the inventional process. However, a more characteristic stance is Wayne Booth's:

[Polanyi's] *Personal Knowledge* is the most important critique of systematic doubt in the name of what I have called systematic assent; though I can by no means agree with all that he says, his "postcritical philosophy" challenges the dogmas of modernism more thoroughly than any other modern work I know. He appears here again and again, usually unacknowledged and often in forms he might not himself recognize.⁵⁸

The "modern dogma" which Booth seeks to replace is an epistemology of presumed certitudes, guaranteed by methods of doubt. He proposes replacing it with a rhetoric of assent, "the art of discovering warrantable beliefs and improving those beliefs in shared discourse."⁵⁹ Booth sanctions the work of accredited communities and our indwelling of other minds. However, the epistemology of tacit knowing remains unmentioned in his work.

In constructing a concept of "public knowledge" Lloyd F. Bitzer makes excellent but similarly limited use of Polanyi. Public knowledge is in part a confluence of "personal facts," that is, truths which exist only because of human participation, though most of these achievements are known only tacitly by any single member of a culture. However, Bitzer is at pains to distinguish "public knowledge" from scientific findings: "The distinction between knowledge and opinion, or between truth and mere belief is . . . fundamental and real."⁶⁰ From reading Bitzer, one would never guess

Polanyi's concern with heuristic action within the sciences. One would never guess of Polanyi's epistemology.

Chaim Perelman, in a 1968 essay on Polanyi,⁶¹ expresses the same ambivalence implicit in Booth and Bitzer. Perelman finds important kinship with Polanyi's critique of objectivism and his concern with invention. However, Perelman believes that in our culture scientific discourse enjoys a privileged status, which exempts it from the realm of rhetorical interactions.

Booth, Bitzer, and Perelman, as members of the "good reasons" movement in current rhetorical theory,⁶² are concerned primarily with the substance of discourse. Yet they typically delimit rhetoric by excluding a particularly "substantial" sort of discourse, scientific, from it. Walter B. Weimer⁶³ challenges this group's assumption that scientific work is above the realm of rhetorical action and, therefore, exempt from it. Such a view relegates rhetoric to second-rate status and gives no account of scientific change. And because it appeals to a notion of reason which is mistaken and, therefore, unattainable, it consigns science itself to irrationality. Weimer's work⁶⁴ points toward a more adequate and inclusive view of reason, one which takes many of its bearings from Polanyi.

In 1972 Carroll C. Arnold wrote of the "good reasons" movement: "It seems to me that the question of how one comes, in the first place, to know what he afterwards thinks he knows and tries to put forward for adherence has not been confronted head-on."⁶⁵ Rhetoricians' diffidence in approaching epistemic concerns is nowhere better illustrated than in their treatments of Polanyi — on the one hand, embracing his critique of doubt and his conception of communities, on the other, ignoring or abjuring his epistemology which arises from that conception.

Rhetoricians' traditional habitat has been the realm of public discourse rather than personal ideation. Among the other reasons for their reluctance to grapple with epistemological issues, they remain sensitive to Plato's charge that rhetoricians cannot define their art; the exclusion of science seems a way both to "protect" science and to delimit rhetoric's scope, and within that delimited scope much very valuable work is being done. Perhaps finally, faithful to Aristotelian traditions (if not to Aristotle himself), rhetoricians often assume that we have understood something when we have classified its parts. Thus, arts of invention, to which concerns with substance should lead, may be construed essentially as formal classificatory systems. They may not be that at all. Helmut Kuhn writes:

The nature of cognition itself precluded the possibility of an *ars inveniendi*, a technique of discovering truths such as Raimundus Lullus and Leibnitz had imagined it. This is the negation inherent in the affirmation of personal knowledge.⁶⁶

In some important irreducible respects, arts of invention may need to be arts of the *informal*. That does not need to render them inaccessible to scholarship, or to pedagogy, as the ancient rhetoricians and Michael Polanyi knew full well.

Polanyi was called to philosophic work by his perception of a cultural exigency. Thus, in important respects his entire enterprise is an instance of rhetorical action. His critique of ideologies seeks to account for the

sources of their persuasive power; by tracing that power to the fusion of contradictory impulses, he suggests interesting potentials for rhetorical criticism, while his work provides sobering illustration of the labors which rhetorical criticism may demand.

But Polanyi's central contribution lies in his explorations of tacit knowing. We have traditionally asked in what respects persuasive acts might be heuristic. Polanyi's epistemology suggests a promising shift in orientation; focusing on heuristic acts, he finds that they are irreducibly persuasive. Thus, it may be that invention is indeed central to rhetoric, though perhaps not in the ways we have usually supposed.

Rhetoricians who wish to pursue these directions will find that they have colleagues in other disciplines, who are attempting to place Polanyi's epistemology in the context of contemporary philosophy,⁶⁷ and to explore his implications for our understanding of ethics,⁶⁸ aesthetics,⁶⁹ and language,⁷⁰ but in rhetoric as elsewhere, Polanyi would insist that our work must be guided by standards which we set for ourselves, that we achieve reform piecemeal, as we subtly and gradually reshape the grounds of our discipline. To embrace that orientation is to acknowledge the efficacy of rhetorical interaction; to study the ways that rhetorical theorists have begun to read Polanyi is to observe such interaction taking place, productively, within the community of rhetoricians.

Quest¹-ions² of This Issue

Of the persons represented in this issue, no more than two would consider themselves rhetoricians: one teaches writing; the other is a past editor of the *Quarterly Journal of Speech*. Current affiliations of others are as diverse as academic administration, counseling, education, philosophy, music, religion, and political science. Yet all are rhetors, in at least these senses: they presume, by their presence here, that insights can be achieved when we cross disciplinary boundaries to interact with persons different from ourselves. Second, rather than respectably safe papers, I asked each potential contributor to play from the question(s) that person found him- or herself having, not sacrificing potential significance for apparent coherence. These articles, in a word, are pre/texts.

Pre/texts have a way of speaking for themselves, in voices that even their authors may not immediately recognize. As one writing teacher and rhetorical theorist, here are some tones I hear in the articles which follow. The implications for writing instruction which *James Reither* finds in Polanyi's thought are remarkably coherent with current research findings and with successful pedagogical practices, as those are being explored through the National Writing Project, for example. Reither is correct in saying that intention shapes verbal expression; surely students' presumptions that they should have no intentions helps account for their difficulties as writers.

¹Quest: A seeking; adventure; esp., in medieval romance. Those who make search collectively.

²Ion: An electrically charged atom or group of atoms. -ion: A suffix meaning act or process. (*Webster's New Collegiate Dictionary*)

Yet one thing that makes the teaching of writing (and writing itself) so difficult (and so rewarding) is that verbal expression can also shape the writer's intentions, at least in some instances, and perhaps most clearly in certain genres — pre-eminently poetry. Here, as *Diane Sautter* puts it, "The interactions between tacit and explicit . . . provide the momentum for the writing." In Levertov's poem, Sautter traces "the kinesthetic movement of organic writing," giving us something very like a protocol of a poem's growth. Is it also in some sense a protocol for *any* act of writing? Sautter recreates tensions recognized and resolved — in time, hence productive of rhythm. She speaks of the poem's recreating "a rare moment of pivotal change," and later, citing Dewey, she comes close to saying that any experience produces some change, because it involves some suffering. Rhetoric is an art of change, and we may be moving here toward some meaning of "pathos" much more profound than "emotional appeal." "Energy" and "presence" likewise are important rhetorical concepts, and they may mean something more than stylistic quality and vivid description. Surely both energy and presence are necessary for the I-Thou encounter Sautter characterizes. It has long been assumed that "rhetoric" is one thing and "organic form" is something else. Sautter's work, like much of the best current work on composing processes, suggests that we may be ready to outgrow that division.

Rembert Herbert shows that such dynamics as Sautter sketches pertain not only to poetry. The qualities he finds in a "coalescence of meaning" — a release of energy, a sense of connection, a disturbance in the sense of time — indeed are not restricted to writing, but they do signal to any writer that the writing is going well. These qualities may be bound up with the ancient concept of *kairos*, having to do with "fitness for the occasion" and "the fulness of time."⁷¹ In *kairos* we have a concept central to Christianity and, earlier still, to rhetorical theory. Herbert's speculation about physical spaces suggests yet another connection: "topic," the term which characterized ancient theories of invention and of memory, originally meant "place."

Robin Hodgkin maps for us a kind of discovery that Herbert seeks. The space that concerns Hodgkin is personal rather than physical, and his interacting ideas of "potential space" and the dialectics of play/practice/discovery could have the first importance to us, in at least these respects: First, they help us reflect on writing processes, *from the inside*. As Hodgkin put it in a previous draft: "What kind of experiences do we have when we move through a vista and find ourselves involved in the struggle to discover form?" I, at least, fuss about my physical space, early in the act of writing. I must have some open space, but not too much; a cleared desk top will do. But *throughout* the act of writing, I must sense "potential space" within the writing itself. And I know my writing is nearing its end, not when that space has been "filled," but when the words echo distinctly from the movable and permeable "walls" that have defined that particular "space." At "stuck points" I am aware only of those walls, not the space, and I need to play (yes, I sometimes literally retreat to the bathtub for this). I "practice" many sentences, jotting them first on deliberately messy scratch sheets that are a fetish for me. And so on. (I trust it is

obvious that this impressionistic sketch is only an illustration.) Second, we now have some good insights into the composing processes of poor writers and good ones, but as yet no very clear picture of how a person moves from the one to the other. Hodgkin's ideas could help us develop such a picture, while also helping us identify the most promising points in the progression for teacher intervention, and further supporting Britton's contention that all writing is in some senses expressive. Third, many of us face narrowly-defined "competency" movements. We need to insist on some definition of "competence" such as Hodgkin's: "the loose assembly of skills and attitudes which a person brings to a field of opportunity." Finally, I must remark that when Hodgkin speaks of "symbol" as "the integration of differences and the emergence of some higher order entity," he evokes for me the rhetorical doctrine of *stasis*. This doctrine was at the heart of classical invention theory; according to it, contending parties must join issue on some particular question; the question stakes out common ground (and the area of dispute); the question establishes the "potential space" of the discourse.

This issue contains no protocol of a particular writing process; I wish it did. But *William Goding* gives us something more remarkable — an instance of writing that is its own protocol. Perhaps such a piece could only be a poem.

Rhetorical theory is subject to reductions of various sorts. One of the most tempting reductions is to deny agency to audiences, seeing them instead as objects to be manipulated. In Polanyi, Robert Scott finds an orientation that would counter that reduction. Scott's attention to aesthetics may be kin to Sautter's and Herbert's; all three may be suggesting that I-Thou relationships are irreducibly aesthetic. And from Polanyi, Scott discloses important tests of commitments, including the commitments of an I-Thou relation. Also, as Scott says, in a new orientation the meaning of "tool" begins to shift — perhaps along lines that Hodgkin is suggesting. In referring to rhetoricians' attempts to distinguish science from scientism, Scott points to work which was done independent of, but which is consistent with, Polanyi's analyses. Robert Scott has been a pioneer in exploring relationships between rhetoric and epistemic assumptions. Those interested in this area will want to read his work, written prior to his interest in Polanyi.⁷²

Rhetoric, says Aristotle, argues opposites. To engage in rhetorical action clearly is to assume that toleration of some sort is a positive quality. If the truth were definitively held by some, rhetoric would have no function except perhaps the "managerial" one of enabling them to enlighten others. However, if toleration had no limits, if all possible claims were equally plausible, it would be pointless to advance some of them in preference to others. If Polanyi is right in tracing contemporary dogmatism to a foundation of radical scepticism, then we should seek elsewhere a rationale for toleration. James Wiser, who elsewhere has shown that like the ancient Greeks', Polanyi's conception of human reason is irreducibly social and therefore political,⁷³ here seeks a rationale for toleration in Polanyi's thought. For Polanyi rationality does require a commitment — a tacit one, I would add — to the epistemology of personal knowledge. That

epistemology, which views rationality as truth-seeking, provides a rationale for toleration. Wisser correctly points out that Polanyi's epistemology is closely bound up with his stratified ontology of boundary conditions and marginal control. But I am not sure that to accept an ontology of stratification is perforce to accept any metaphysical view; Polanyi himself frequently illustrates his ontological principles by reference to quite specifically limited arenas (for example, in a "spoken literary composition" the "lowest" level is the voice, which enables but does not account for the utterance of words, which is necessary but not sufficient to account for the formation of sentences, and so on.)⁷⁴ We do need to consider the ontological (and transcendent) status of persons and persons' statements, a process that has hardly been begun. Scott, Sautter, and others are finding in Polanyi grounds for a rhetoric of mutuality. The conditions for such mutuality, including the ontological conditions, operate tacitly, not as explicit doctrine.

Loyal Rue gives a lucid and purposeful depiction of Polanyi's ontology, and he makes a reasoned case that any plausible mythos must be consistent with, though not restricted to, the best that we understand of "lower" levels of reality. However, Polanyi states that in myths, "incompatibles remain incompatible";⁷⁵ that is one of their distinguishing qualities. I mention this apparent disagreement as a question drawing us to further reflection and perhaps to a profounder understanding of myth, and to inquiry, than we now have. Toward the end of his paper, Rue suggests some practical ways to create the sociological conditions for inquiry of an integrative sort. It may be that, for Polanyi, inquiry is itself the new mythos; certainly within acts of inquiry, Polanyi finds the integrations of cosmos, ethos, and pathos which mythos achieves — and which are the three modes of proof appropriate to rhetoric.

For Dale Cannon the "other," as subject matter and — especially — as distinctly other person(s), is essential to inquiry. He shows how an objectivist framework denies the "other," leaving us alien to ourselves, able to exchange information but not to engage in persuasion. Rhetoric involves a *meeting* of the genuinely other; even the mutual definition of conflicting claims, in ancient *stasis* doctrine, reveals as much. To engage an "other" is tacitly to acknowledge her (or his) status as transcendent object and transcendental condition; the interplay of our different perspectives is essential to the objectivity any of us can claim. Here Cannon is very close to the tests of commitment which Scott has found in Polanyi. And Cannon's renewing understanding of objectivity, "the acknowledged capacity of the known to command a meeting of independent minds," draws instructively on Polanyi's understanding of "the real" as capable of indeterminate manifestations. Cannon may be pointing us toward a distinctively rhetorical understanding of reason, one which in affirming "our somatic presence in the world" permits us to address others and be addressed by them.

This issue ends with work of two men who knew Polanyi personally and have lived longer with his thought than have most others. *Poteat's* essay, an effort to render sensible the "obviousness and triviality" with which others sometimes dismiss Polanyi, is an excision from the starting points of

a longer work, neither obvious nor trivial. As Poteat says here, Polanyi's enterprise was radical, perhaps in ways that he did not suspect; we should expect that familiar words – such as rule, belief, implication, and logic itself – will assume meanings unfamiliar in the philosophic tradition from which Polanyi distances himself. In his book-length manuscript, *Polanyian Meditations: In Search of a Post-Critical Logic*,⁷⁶ Poteat both characterizes that logic and enacts his search for it, as he does here. Some hint of Poteat's directions in the longer work may provide some orientation to his points of origin published here, though those hints can be no more than still photographs of a moving scene or, an impossible but much more accurate image, slices of sound excised from a symphony. This post-critical logic, a logic not of propositions but of persons disposed to find out the sense of the world, is one of sound more than sight, of tone, retension and pretension, of necessity and contingency, of intentionality and time as "the radix of our mindbodily being in the world." Poteat's directions draw him to close with a discussion of rhetoric and specifically of Perelman's work, which Poteat finds giving back "almost everything that it has sought to claim from Descartes." Poteat's post-critical logic turns out in large measure to be a logic of rhetorical action which both discusses tacit knowing and, true to itself, displays its dynamics, giving us bearings for rhetorical theory and, simultaneously, a protocol of the body's role in writing. Finally, Poteat concludes his beginnings in this issue at a point which should be obvious but is by no means trivial: we ought to read a work in its own terms. Rhetorical critics and writing teachers are obligated to be readers first.

Harry Prosch was co-author of *Meaning*, Polanyi's last book. Here, Prosch invokes Polanyi's understanding of communities to diagnose the inefficacy of Polanyi's rhetorical choices. Yet what rhetorical choices did either man have to exercise? In some senses, none at all. Both men have purchased eloquence, at the price of rhetorical prudence. Perhaps both men show that we must be rhetors first to ourselves, in the presence of others, and in the hope that others will listen. That undertaking, like the reading of Michael Polanyi, is fraught with rhetorical hazards and the risks of new discoveries.

ENDNOTES

- ¹*Knowing and Being*, ed. Marjorie Grene (Chicago: Univ. of Chicago Press, 1969), p. 195.
- ²"Overview of a Cognitive Conspiracy," *Cognition and the Symbolic Processes*, eds. Walter B. Weimer and David S. Palermo (Hillsdale, N.J.: Erlbaum, 1974), p. 428.
- ³*A Rhetoric of Motives* (1950; rpt. Berkeley: Univ. of California Press, 1969), p. 172.
- ⁴"Saying and Showing: Radical Themes in Wittgenstein's *On Certainty*," *Religious Studies*, 10 (Summer 1974), 290.
- ⁵(1958, 1962; rpt. New York: Harper Torchbooks, 1964).
- ⁶Douglas Ehninger, "A Synoptic View of Systems of Western Rhetoric," *Quarterly Journal of Speech*, 61 (December, 1975), 453; Sam Watson, Jr., "Michael Polanyi and the Recovery of Rhetoric" (Unpub. diss: University of Iowa, 1973).
- ⁷In one of our conversations, Polanyi was recounting his various careers. "And the moral is," he said, laughing, "to start your important work earlier in life than I did!"
- ⁸"Why Did We Destroy Europe?" *Studium Generale*, 23 (1970), 909.
- ⁹*Personal Knowledge*, p. 228.
- ¹⁰*The Tacit Dimension* (1966; rpt. Garden City, N.Y.: Doubleday, 1967), p. 3.
- ¹¹*Personal Knowledge*, p. x.
- ¹²"Tacit Knowing: Grounds for a Revolution in Philosophy," *Journal of the British Society for Phenomenology*, 8 (October 1977), 164. This entire issue is devoted to Polanyi, who was one of the Advisory Editors to the journal.
- ¹³*Personal Knowledge*, p. 143.
- ¹⁴*Science, Faith, and Society* (1946; rpt. Chicago: Univ. of Chicago Press, 1964), p. 52.
- ¹⁵*Knowing and Being*, p. 67.
- ¹⁶*The Logic of Liberty* (Chicago: Univ. of Chicago Press, 1951), p. 50.
- ¹⁷*Science, Faith, and Society*, p. 52.
- ¹⁸*Personal Knowledge*, p. 150. See also p. 172.
- ¹⁹*Personal Knowledge*, p. 151.
- ²⁰"The Tacit Structure of Religious Knowing," *International Philosophical Quarterly*, 9 (1969), 254.
- ²¹*The Tacit Dimension*, p. x.
- ²²See *Meaning* (with Harry Prosch) (Chicago: Univ. of Chicago Press, 1975), *passim*.
- ²³Ed. Fred Schwartz. *Psychological Issues*, 8, Monograph 32 (New York: International Universities Press, 1974).
- ²⁴Eds. Thomas A. Langford and William H. Poteat (Durham: Duke Univ. Press, 1968).
- ²⁵(New York: Oxford Univ. Press, 1977).

²⁶(New York: Crowell, 1964.)

²⁷(London: Faber & Faber, 1966), p. 13.

²⁸*The Rhetoric*, tr. W. Rhys Roberts (New York: Random, 1941), 1357a. See also Isocrates, *Antidosis*, esp. 256.

²⁹*De Oratore*, II, 232.

³⁰*Against the Sophists*, 13. See also Werner Jaeger, *Paideia: The Ideals of Greek Culture*, III (Oxford: Blackwell, 1961), p. 61.

³¹Jaeger, p. 300, n. 2.

³²*Essays of Four Decades* (1969; rpt. New York: Wm. Morrow, 1970), p. 38.

³³*Language Is Sermonic*, eds. Richard L. Johannesen et al. (Baton Rouge: Louisiana State Univ. Press, 1970), pp. 183-84.

³⁴*Reinventing the Rhetorical Tradition*, eds. Aviva Freedman and Ian Pringle (Conway, Ark.: L & S Books, 1980), pp. 9-17. In the same volume, pp. 19-25, my "Polanyi and the Contexts of Composing" gives some account of Polanyi's implications for understanding acts of composing.

³⁵"Writing as a Mode of Learning," *College Composition and Communication*, 28 (May 1977), 126.

³⁶"Hand, Eyes, Brain: Some 'Basics' in the Writing Process," *Research on Composing*, eds. Charles R. Cooper and Lee Odell (Urbana: NCTE, 1978), p. 62.

³⁷"Some Needed Research on Writing," *College Composition and Communication*, 28 (December 1977), 318.

³⁸*The Development of Writing Abilities (11-18)* (London: Macmillan, 1975), p. 21.

³⁹"The Composing Processes and the Functions of Writing," *Research on Composing*, p. 21.

⁴⁰*The Development of Writing Abilities*, p. 28.

⁴¹"Shaping at the Point of Utterance," *Reinventing the Rhetorical Tradition*, p. 65.

⁴²"Acts, Texts, and the Teaching Context: Their Relations Within a Dramatistic Philosophy of Composition" (Unpub. diss.: Case Western Reserve University, 1980).

⁴³*English in Australia Now* (Cambridge: Cambridge Univ. Press, 1973).

⁴⁴*Lost Bearings in English Poetry* (London: Vision, 1977).

⁴⁵(1960; rpt. New York: Harper, 1971), p. 25.

⁴⁶"On 'Knowing With,'" *Proceedings: Philosophy of Education Society*, 26 (1970), 89-103; "Some Potentials and Hazards of Educational Technology," *Planning for Effective Utilization of Technology in Education* (New York: Citation, 1969); "Research into Imagic Association and Cognitive Interpretation," *Research in the Teaching of English*, 7 (Fall 1973), 240-59; "Science, Art, and Human Values," *Science Teacher*, 36 (March 1969), 23-38; "Tacit Knowing and Aesthetic Education," *Aesthetic Concepts in Education*, ed. Ralph A. Smith (Urbana: Univ. of Illinois Press, 1970), 77-106.

⁴⁷"The Life Uses of Schooling as a Field of Research," *Philosophical Redirection of Educational Research* (Chicago: NSSE, 1972), 219-38.

⁴⁸James L. Kinneavy, *A Theory of Discourse* (Englewood Cliffs: Prentice-Hall, 1971).

⁴⁹"Invention: A Topographical Survey," *Teaching Composition: 10 Bibliographical Essays*, ed. Gary Tate (Fort Worth: Texas Christian Univ. Press, 1976), p. 21; "Paradigms and Problems: Needed Research in Rhetorical Invention," *Research on Composing*, p. 31; "Arts, Crafts, Gifts and Knacks: Some Disharmonies in the New Rhetoric," *Reinventing the Rhetorical Tradition*, p. 55.

⁵⁰Philip P. Hallie, "Models, Burglary, and Philosophy," *Philosophy and Rhetoric*, 4 (Fall 1971), 215-29.

⁵¹David H. Smith "Communication Research and the Idea of Process," *Speech Monographs*, 39 (August 1972), 174-82.

⁵²Jesse G. Delia, "Constructivism and the Study of Human Communication," *Quarterly Journal of Speech*, 63 (February 1977), 66-83.

⁵³Barry Brummett, "Some Implications of 'Process' or 'Intersubjectivity' in Postmodern Rhetoric," *Philosophy and Rhetoric*, 9 (Winter 1976), 21-51.

⁵⁴"The Scientific Community as Audience: Toward a Rhetorical Analysis of Science," *Philosophy and Rhetoric*, 10 (Summer 1977), 143-63.

⁵⁵"Conviviality: A Rhetorical Dimension," *Central States Speech Journal*, 26 (Fall 1975), 164-70.

⁵⁶"Review of Meaning," *Philosophy and Rhetoric*, 10 (Spring 1977), 123.

⁵⁷"Polanyi's 'Tacit Knowledge' and the Problem of Invention," *Rhetoric* 78, eds. Robert L. Brown and Martin Steinmann (Minneapolis: University of Minnesota Center for Advanced Studies in Language, Style, and Literary Theory, 1979), pp. 241-49.

⁵⁸*Modern Dogma and the Rhetoric of Assent* (Chicago: Univ. of Chicago Press, 1974), p. xvii.

⁵⁹*Modern Dogma*, p. xiii.

⁶⁰"Rhetoric and Public Knowledge," *Rhetoric, Philosophy, and Literature*, ed. Don M. Burks (West Lafayette, Ind.: Purdue Univ. Press, 1978), p. 72.

⁶¹"Polanyi's Interpretation of Scientific Inquiry," *Intellect and Hope*, pp. 232-41.

⁶²See my "Polanyi's Epistemology of Good Reasons," *Exploration in Rhetoric*, ed. Ray McKerrrow (Glenview, Ill.: Scott-Foresman, in press).

⁶³"Science as a Rhetorical Transaction: Toward a Nonjustificational Conception of Rhetoric," *Philosophy and Rhetoric*, 10 (Winter 1977), 1-29.

⁶⁴"For and Against Method: Reflections on Feyerabend and the Foibles of Philosophy," *Pre/Text*, 1 (Spring-Fall 1980), 161-203; *Notes on the Methodology of Scientific Research* (Hillsdale, N.J.: Erlbaum, 1979).

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⁶⁶"Personal Knowledge and the Crisis of the Philosophical Tradition," *Intellect and Hope*, p. 116.

⁶⁷Robert E. Innis, "In Memoriam Michael Polanyi," *Zeitschrift für allgemeine Wissenschaftstheorie*, 8 (1977), pp. 21-29; Marjorie Grene, "Polanyi et la philosophie française," *Archives du Philosophie*, 35 (January-March, 1972), 3-5; Wolfe Mays, "Michael Polanyi:

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⁶⁸John M. Brennan, *The Open Texture of Moral Concepts* (New York: Barnes & Noble, 1977); R.J. Brownhill, "Scientific Ethics and the Community," *Inquiry*, 11 (1968), 243-48; Dallas M. High, "Language, Life, and Morality," *Communication: Ethical and Moral Issues*, ed. Lee Thayer (New York: Gordon and Breach, 1972); Harry Prosch, "Polanyi's Ethics," *Ethics*, 82 (January 1972), 91-113.

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⁷⁰C. B. Daly, "Polanyi and Wittgenstein," *Intellect and Hope*, pp. 136-68; Jerry H. Gill, *The Possibility of Religious Knowledge* (Grand Rapids, Mich.: Eerdmans, 1971); Dallas M. High, *Language, Persons, and Belief* (New York: Oxford Univ. Press, 1967); Robert E. Innis, "Meaning, Thought, and Language in Polanyi's Epistemology," *Philosophy Today*, 18 (Spring 1974), 47-67.

⁷¹See James L. Kinneavy, "The Relation of the Whole to the Part in Interpretation Theory and in the Composing Process," *Linguistics, Stylistics, and the Teaching of Composition*, ed. Donald McQuade (Akron, Ohio: L & S Books, 1979), pp. 1-23.

⁷²"On Viewing Rhetoric as Epistemic," *Central States Speech Journal*, 18 (February 1967), 9-17; "A Fresh Attitude Toward Rationalism," *Speech Teacher*, 17 (March 1969), 134-39; "On Viewing Rhetoric as Epistemic: Ten Years Later," *Central States Speech Journal*, 28 (Winter 1976), pp. 258-66.

⁷³"Michael Polanyi: Personal Knowledge and the Promise of Autonomy," *Political Theory*, 2 (Fall 1974), 77-87; "Political Theory, Personal Knowledge, and Public Truth," *The Journal of Politics*, 36 (August 1974), 661-74.

⁷⁴*Knowing and Being*, p. 233.

⁷⁵*Meaning*, p. 125.

⁷⁶Unpub. ms., copyright 1979.