"Conquer or Die"?: Intellectual Controversy and Personal Knowledge[1]

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ABSTRACT Key Words: Michael Polanyi; *Personal Knowledge*; Gadamer; Placher; intellectual controversy;community; tradition; foundationalism; anarchy; conversation.
This article examines the subject of intellectual controversy in Michael Polanyi's thought, particularly in Personal Knowledge*, sketching the reasons for disputes, obstacles to solving them, and strategies for overcoming these obstacles. It concludes with a focus on the role of tradition and community in Polanyi, using suggestions of H.G. Gadamer and W. Placher.*

This paper examines some aspects of the encounter of rival conceptual frameworks as they appear in Michael Polanyi's thought, especially in *Personal Knowledge*.[2] I will argue that Polanyi's "big book" stresses the *obstacles* to resolving intellectual disagreements, partly because of his polemical situation, and partly due to the nature of intellectual argument itself.[3] I will then argue that Polanyi's understanding of tradition and community contains resources, sometimes implicit, that can help *resolve* such disputes when appropriate, by using suggestions from Hans-Georg Gadamer via William Placher.

This might seem a foolish task in that so much of *PK* concerns this theme of intellectual disagreement: he warns us in the Preface, for example, that "any particular commitment can be challenged, but only on the grounds of a rival commitment. The only question is, then, how a particular set of beliefs can be justified. Three-quarters of this book serves to introduce my answer" (x). Consequently *PK* is full of discussions of intellectual controversies – the critical vs. the post-critical, the objectivist ideal vs. personal knowledge, a Marxist vs. a free society – and Polanyi is working on every page to establish his views against a hostile orthodoxy. But though it may be difficult to extract this particular issue from *PK*, where it is so closely entwined with every other issue, it is an important topic that demands the effort.

While questions about intellectual controversies have been a penumbra behind my thinking for a long time, they emerged into the foreground not long ago in a student in one of my classes. A brillant young woman, a winner of the Scholarship Cup as the top academic graduate of her class, a biology major with a strong religious faith, and a member of my "Religion and Science" class, revealed serious reservations about certain parts of the theory of evolution. All term we struggled together to find just what it was that bothered her in evolutionary theory, and how those concerns could be accommodated in her religious faith. We were successful mainly in agreeing that the conversation and the struggle needed to continue, and she went off to mission work in Brazil after graduation, to the horror and incomprehension of her science professors. But how, I kept asking myself, could this young woman --or anyone else, for that matter --move from allegiance to one perspective to allegiance to a new and at least partially different perspective? This experience started a train of thought that has gradually broadened to include a number of contemporary intellectual discussions.

Most of western philosophy, particularly since the Enlightenment, seems to answer a clear "yes" to the question of whether or not it is possible for intelligent people to understand rival ways of looking at the world adequately enough to judge between them as to which way is intellectually most satisfying. Nevertheless,

significant challenges to this answer have arisen over the past fifty years in debates about religion in academia; in debates in the U.S. between conservatism and liberalism, in Middle East debates between Jews and Palestinians and in many other debates This issue can be seen in the philosophy of science in the various challenges to naive realism by persons such as Thomas Kuhn, Russell Hanson, Paul Feyerabend, and Polanyi, all of whom questioned confidence in a universal rationality whose parameters could be clearly mapped, and whose borders one could cross by making an explicitly logical transaction.

A representative formulation of the problem is Peter Winch's discussion of the alternative world-views of a primitive African tribe (taken from Evans-Pritchard's work on the Azande) and a western scientific community – that of medicine – in which he asserts that these views could *not* be compared and evaluated in an absolute, straightforward way that would allow one to decide which was more "rational" or "logical" than the other.[4] The terms "rational" and "logical," he claimed, gain at least part of their force from the cultural matrix of values and assumptions in which they are embedded.

In recent decades, numerous thinkers from Wilfrid Sellars and W.V.O. Quine to Kai Nielsen and Charles Taylor have reflected on aspects of this issue, and it has become a concern of various postmodern schools of thought (feminist theory, the social study of science, post-colonial approaches to literature, among others). The question has become pressing in at least two areas of theology: discussions of religious pluralism (can one affirm the truth of say, Christianity, while at the same time allowing for the possibility of truth in a non-Christian tradition?), and religion/science discussions of whether the language of "creation" can make sense if one also uses the language of "evolution" – this issue my student was struggling with in my class. I certainly will not be addressing all of these aspects of the question, but mention them as a reminder that this problem is a central one of current intellectual life, and so worthy of wrestling with. Rather than attempt a complete mapping of "conceptual disputes" in *PK*, I want to focus on the angle from which Polanyi saw this question, in the discussion of which many additional features of Polanyi's thought will be mentioned.[5]

I. Why Argue?

Why do intellectual controversies arise? In the first philosophy of science I read as a student, they arose very little.[6] This traditional, textbook view of science sees it asking a series of "small questions" which can be answered through experiment or measurement. "In this way," the orthodox view claims, "through the cumulative efforts of many workers, a body of verifiable facts will be built up which will then allow the framing of slightly bigger questions. This is a long process and entails much work, but it allows a steady accretion of facts on a firm foundation of verifiable observations."[7] Here science progresses inexorably, organically, or, to use more recent metaphors, mechanically, with the inevitability of a calculator.

PK, by contrast, is full of stories of scientific controversies, of bitter arguments between distinguished scientists, of angry exchanges and damaged careers, and this is the first distinctive thing to notice about Polanyi's thoughts on the subject. From beginning to end, Polanyi discusses personal knowing using examples drawn from scientific disputes. The reason for this particular approach seems fairly clear, and has to do with his polemical situation; he was, of course, opposing the regnant objectivist view of science as inevitably inductive, automatically progressing by virtue of feeding facts into its method as one would feed data into a computer. Such a view naturally reduces the role of the individual scientist to that of a careful technician, a bureaucrat tending the machines of method, observation, experiment, and verification. It also reduces the moral or value component in science to invisibility. Polanyi's effort to restore the scientist and his or her values to the picture of science

led to his relative stress on the scientist as creative genius, working through discovery, revolution, and controversy to expand our vision of nature, under obedience to beliefs in a reality which called him, and in a community that upheld this quest. He argued that this was a more accurate account of how science actually works. And though his discussion is primarily in terms of scientific controversy, he makes clear his belief that his claims apply also to other areas of articulate culture.[8]

I find four reasons in *PK* that, contrary to the objectivist orthodoxy, considering rival conceptions of truth is an unavoidable part of intellectual life:

(1) At the most basic level, Polanyi argues, we are driven by primordial intellectual passions to continually make better sense of the world. Curiosity, "the joy of seeing things," and "an urge to see sense and make sense" are all "proper strivings" which reflect the "essential restlessness of the human mind."[9] Such innate drives promise to "enrich and enliven" us by extending our grasp of reality. We must argue because we are not made simply to receive the world passively.[10]

(2) We also are drawn into controversy because we are attracted by the "intellectual harmonies" of rival conceptions, by their appeal to our cognitive aesthetics. We cannot help appreciating their simplicity or regularity, their profundity or ingenuity — in short, their beauty. Polanyi does not recite these qualities as explicit criteria by which ideas may be judged, but as lures, as appeals to our minds that testify to the reality of the ideas containing them.[11] We consider abandoning our old ideas because new ones are so beautiful.

(3) Our traditional conceptions, by contrast, can come to appear shabby and inadequate: "…it is a fact that time and again men have become exasperated with the loose ends of current thought and have changed over to another system, heedless of similar deficiencies within that new system. There is no other way in philosophy than this…" (*PK*, 18). To support this claim, Polanyi recites examples from the history of science that illustrate the human propensity to judge rival theories *not* against Truth itself, or against some standard independent of both combatants, but comparatively, against each other, and in such a contest, the theory with fewest blemishes may win.

(4) And finally, Polanyi claims that our conceptions must change because the world is constantly changing around us, forcing us to acquire new maps to describe it. "Owing to the unceasing changes which at every moment manifestly renew the state of things throughout the world, our anticipations must always meet things that are to some extent novel and unprecedented" (*PK*, 103). Thus not only internal drives, and the condition of our disciplinary theories at a given moment, but also the external world, lead us to constant intellectual renewal.

Thus intellectual argument is unavoidable, even desirable, in a vital literate culture, testifying not to the irruption of the irrational into thought, but to the actual situations of thinkers who bring widely different commitments and experiences to their task.

II. Hurdles

Nevertheless, though argument between rival views might be a sign of a healthy intellectual community, Polanyi clearly felt it was not easy to resolve these disputes. I argue that the gravamen of Polanyi's approach to this question, which is scattered throughout the first three parts of *PK*, is found in the obstacles we encounter when we attempt to evaluate a competing system of beliefs. Though it approaches the subject from

the negative side, the structure of personal knowing and Polanyi's affirmation of the achievements of modern science are revealed in a tour of these obstacles:

(1) We find it difficult to move from one conceptual system to another because we have no independent, fixed framework from which to evaluate the two; we have only our own perspective, to which we are already firmly committed (*PK*, 151; 322). When I am buying a lawn mower, I can carry *Consumer Reports* into the store with me, and compare the various brands for sale. But there is no comparable guide for distinguishing better theories from good, which makes the task much more difficult. We long for such an objective guide, but must finally depend upon personal judgement, which is fraught with risk.

(2) From the perspective of personal knowledge, commitment to a particular articulate framework is made possible by indwelling myriad clues, the joint meaning of which is the framework endorsed. Since these personal co-efficients of a rival view are invisible to us, we have no way of entering easily into that rival framework, no way of seeing or understanding what its adherents do.[12] In effect, critics end up focusing only on parts of a system of ideas, which guarantees incomprehension: "All particulars become meaningless if we lose sight of the pattern which they jointly constitute" (*PK*, 57). Adherents of a view have the entire system in mind in its ultimate meaning, while critics are looking only at isolated particulars which make no sense to them, precisely because they are isolated from the whole.[13]

(3) As an accurate comprehension of a conceptual system requires a commitment to its reasonableness, a "logical gap" exists between the skeptic and a system of which he or she is suspicious. The very nature of discovery insures that there is no inductive path or bridge from one system to another: "And different systems of acknowledged competence are separated by a logical gap, across which they threaten each other by their persuasive passions." (*PK*, 318). "We have to cross the logical gap between a problem and its solution by relying on the unspecifiable impulse of our heuristic passion" (*PK*, 143), by which we accept the new vision of reality shown to us as real. The problem, however, is that not *believing* in the rival view makes it impossible to *understand* it: "…truth is something that can be thought of only by believing it." (*PK*, 305) Thus Polanyi countenances uncompromisingly the paradox that knowledge depends on anterior belief, which the critical tradition teaches us to distrust until the knowledge has been verified.

(4) Not only is a new conception of the truth difficult to enter in and understand, it is also resistant to our critical questions by virtue of the strategies of stability possessed by all articulate systems. Polanyi stresses three such strategies:

(a) circularity - by which he means the ability of the adherent to meet a new challenge by interpreting them by means of similar factors not now in question. In the manner of a dictionary, defining each word by reference to others not currently in view, science operates by an intentional circularity that reinforces itself constantly (*PK*, 288, 299).

(b) self-expansion (or "epicyclicality") - the elaborations of a system by which it is made to cover almost any conceivable eventuality. This almost-infinite flexibility of an intellectual system makes it quite difficult for a rival system to prove its superiority, as its criticisms of the traditional system are always being absorbed. (*PK*, 288)

(c) suppressed nucleation - by which the germination of rival views is denied by rejecting any grounds on

which they might take root. For example, the evolutionists may hold off the criticisms of scientific creationists by insisting that scientific explanations are only those which are published in mainstream, refereed journals, which they, of course, control. The same would apply to disputes within mainstream science, as well.[14]

To these more formal strategies of avoidance, we may add various other "apologetic" factors which scientists defending a traditional conception may employ (*PK*, 275). They may live at a time in which the state of science is simply not developed enough to allow the alleged theory to be credited, as happened with mesmerism in 19th century England. Or there may be important social or political factors which influence scientists to dismiss rival views, as happened to the French Academy in the 18th century when confronted with meteorites. Or finally, it may be simply that the style or method of the proponent of a new view is so foreign to the scientific community that his or her views are ignored.[15]

Thus there is a natural conservatism in intellectual life, which leads thinkers to maintain the stability of their conceptions against rival views: "Any contradiction between a particular scientific notion and the facts of experience will be explained by other scientific notions; there is a ready reserve of possible scientific hypotheses available to explain any conceivable event. Secured by its circularity and defended further by its epicyclical reserves, science may deny, or at least cast aside as of no scientific interest, whole ranges of experience which to the unscientific mind appear both massive and vital." (*PK*, 292)

(5) In addition to the difficulty of overcoming these powerful defenses of a conceptual system, the person attempting to evaluate it must acknowledge, Polanyi argues, that the criteria by which we evaluate a theory are finally ambiguous (*PK*, 166). Given that the rival view presents an accounting for the facts as reasonably as the orthodox view, and claims to be internally coherent, consistent with other views, and fruitful for further discovery, we are left with the need to judge between its "intellectual" attributes, of "simplicity" or "symmetry," or simply "beauty." Polanyi's radical answer here is that such judgement cannot render explicit proof for the superiority of one view over another, because the elements which must be judged are inherently ambiguous, as they are pseudo-substitutions for a sense of rationality that can only be gained in a personal apprehension of the theory's bearing on reality.[16]

(6) Another feature of intellectual conflict that makes its resolution difficult is the cultural context of science, which Polanyi stressed in *Science, Faith, and Society*, published twelve years before *PK*. Against the ruling view of the time that saw science as an explicit structure of laws, theories, and procedures, Polanyi carefully described the many social dimensions of science: universities and the master-apprentice relation in which scientists are trained, research teams, professional societies and journals, funding agencies, and authority structures, all of which work together to maintain the vitality of scientific thought. Though *PK* does not examine this social dimension in the same way, it presumes its importance: "…scientific value must be justified as part of a human culture extending over the arts, laws and religions of man….Young men and women brought up in this culture accept it by pouring their minds into its fabric, and so live the emotions which it teaches them to feel. They transmit these emotions in their turn to succeeding generations, on whose responding fervour the edifice relies for its continued existence" (*PK*, 173-74; see also pp. 203-245).

The point of this cultural rootedness of science is that it makes the evaluation of scientific claims difficult, because they are so closely intertwined with social, political, or economic features. In addition to the internal ambiguities of scientific judgements, and the personal factors which may influence given decisions,

there are cultural contexts which impinge on the conflict situation, making it difficult to evaluate its claims to truth

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(7) Finally, we should mention that controversies may also provoke fear, a threat of change that may lead the thinkers involved to act in less than rational ways: "We are shocked by the offer of an unfamiliar system purporting to be meaningful. When the public is pressed to enter the new framework so as to discover its meaning, their bewilderment turns into indignation. They are outraged by the respect paid to what seems to them deserving of contempt and angry at the implied contempt for their own standards of excellence….In such conflicts the two sides are actually fighting for their lives, or at least part of their lives." (*PK*, 200) And: "…we suffer when a vision of reality to which we have committed ourselves is contemptuously ignored by others. For a general unbelief imperils our own convictions by evoking an echo in us. Our vision must conquer or die" (*PK*, 150).

Here I should note that though Polanyi seems aware of the depths to which people can sink in such controversies (*PK*, 151), this does not seem to me to influence his thinking about knowing to a significant degree. His rationalistic, scientifically-oriented description of this process is optimistic in this regard. Here, perhaps, we see that, despite his acute observations about how scientists actually work, Polanyi stands quite apart from the "hermeneutic of suspicion" that we associate with postmodern attitudes from Marx to Nietzsche to Freud (and beyond), a suspicion that claims covert, unacknowledged strategies of survival really operate in intellectual discourse. Perhaps the difference between these positions is that Polanyi's suspicion is less ideological, and more "observational," than the theorists mentioned.[17] He would not deny that there is a "shadow side" to science, but he would deny that these shadows must necessarily obscure any and all knowledge of reality. Such shadows represent a failure of scientific thought, not its essential nature. In this respect, Polanyi is a reformer of the scientific tradition, not one who wants to overthrow it.

We should also note here that while Polanyi would not embrace conflict as the heart of science, he would also not affirm the resolution of conflicts as the center of science. One attempts to bridge the gap between different perceptions of the world because each perception is the result of acts of knowing that bring disparate particulars into a comprehensive unity which consititues their joint meaning. It is possible that my act of integration has missed particular facts that could alter the meaning which they jointly consitute. The history of science gives many examples of claims that prove premature, or incomplete, or which have a bearing quite different from what was originally sensed, or that are simply wrong. One must attempt to enter rival theories because the pursuit of truth demands it, knowing as we do that others may have seen aspects of reality of which we are ignorant. Because reality continually unfolds new vistas before us, science will never reach a point at which there are no conflicts to resolve, no differences of perspective to consider.[18]

Looking back on the many hurdles one must jump in order to move to an alternative framework, it is perhaps understandable that some critics saw Polanyi in *PK* as a radical relativist, denying the possibility of transfer across ideological lines.[19] The very history that informs and enlivens his account of personal knowing, however, argues against this view, for Polanyi was aware of many cases of successful intellectual reform, or even scientific revolution; indeed, these were his chief examples of genuises at work.[20] We must conclude, I think, that Polanyi's laser-like focus on the target of his polemic — a positivist orthodoxy that tried to banish all passion from science — is the most salient reason for his attentiveness to scientific controversy. This allows us to see this emphasis then, not as an essential, crucial feature of his philosophy, but as one feature to which he gives full attention in *PK*. Intellectual disputes, reflecting as they do our passion for truth, are necessary parts of

scholarship, and owing to the reality and power of these passions, such disputes cannot be easily resolved or dismissed.

Disputation should be seen as a particularly vigorous aspect of intellectual growth, part of the struggle necessary to establish our convictions against challenges to them. Yet I would argue that *PK* also contains, less visibly, perhaps, impressive resources for overcoming many of the hurdles that stand between rival conceptions. Polanyi's last word is not fideistic or solipsistic, but hospitable, for he believes deeply in the integrative potential of a free society. To this we now turn.

III. Strategies

Engaging in the evaluation of rival views is unavoidable, yet there are significant obstacles to doing so. How can this task be responsibly accomplished? Believing that the weight of his thought is genuinely optimistic, what strategies, beyond the normal elements of intellectual discourse, do we find Michael Polanyi suggesting for successfully engaging with and evaluating rival conceptions? After noting those strategies mentioned in *PK*, I want to suggest that it is Polanyi's understanding of community, of tradition, and of "tacit knowing" that offer the proper context for addressing this issue. Here we must acknowledge, I think, that the "big book" of *PK* needs to be supplemented by other writings of Polanyi, chiefly by *Science, Faith, and Society* and *The Tacit Dimension*; while all of *PK* presumes the presence of the scientific community and its surrounding culture upholding the affirmations of science, these topics are dealt with only briefly, in a couple of sections of chapters.[21] First, however, what specific help do we find in *PK* for resolving intellectual disagreements of a fundamental sort?

(1) Most important on the grounds of personal knowledge is the need to present a new conception of knowledge in such a way as to gain the intellectual sympathy of the community: "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" (*PK*, 151). The grammar of Polanyi's remarks here is straightforward: we can only fully know what we can passionately affirm as true, as bearing on reality; therefore, to enter into a system of thought, I must be convinced in a preliminary way that it is worthy of my commitment.[22] Only by placing myself within the system, upholding its claims by my own affirmations of its value, will I be in a position to experience the heuristic passion which will carry me across the logical gap that separates this new conception from my old. In opposition to the critical tradition of beginning with an attitude of doubt, Polanyi argues that true intellectual growth can only begin with sympathy, with respect.

(2) A second way in which intellectual disputes may be rendered less intractable is to apply the technique of *compensation* (*PK*, 135-39). After stating that the scientific value of any conception is a joint result of three factors – certainty, systematic relevance, and intrinsic interest – Polanyi notes that "the three criteria apply jointly, so that deficiency in one is largely compensated for by excellence in the others" (136). He then goes on to give numerous examples, including the theory of evolution, the work of Tycho Brahe, Wohler's synthesis of urea, the discovery of a living coelacanth, Pasteur's work on spontaneous generation, and Freudian psychoanalysis, of scientific developments that lacked one or another of the factors mentioned, but were yet accepted as important discoveries or proposals. Science compensated, usually unconsciously, for a lack of scientific value in one area, by stressing those merits a new conception *did* have, and such judgements are

personal assessments of leading scientists that can not be explicitly formalized. Here we see a strategy that can be used to maintain the stability of a belief against criticism used also to accept a new theory that is not in every respect "kosher" by the normal rules.

(3) Analogous to such decisions, and underlying them at a remote distance, are the workings of perception that were clarified by Gestalt psychology. Here we find that in the most elementary acts of sense-making, the mind overlooks or represses anomalous facts in order to create a coherent view of things. Similarly, the scientist must often overlook occasional facts in the laboratory that could conceivably count against his conception of things, but which must be judged "anomalous," in order to prevent time being diverted from the primary tasks of the lab to diversions that will almost certainly prove trivial (*PK*, 138, 275-76). Such decisions rest on personal co-efficients of the scientist's knowledge of his subject, and cannot be reduced to an explicit rule. Likewise, we may propose that a rival conception should not be held to an artificially high standard of perfection in accounting for all possible facts, but that our attention be focused on the essential truth of its message.

These three strategies may serve as illustrations from *PK* of the often unrecognized ways of resolving intellectual controversy. But I want to turn now to a different level of discussion, and try to get out the root reason that Polanyi can be optimistic about intellectual change, the underlying reason we might label him a contextualist, but not a relativist.[23] To do this I want to consider his thought on tradition and community in a preliminary way, and note the role of his theory of tacit knowing.

IV. Conversation in Community

Against the orthodox picture of intellectual controversy as a war of ideas, consisting solely of facts, propositions about those facts, conceptual systems composed of those propositions, and arguments concerning these systems, Michael Polanyi situates intellectual debate within human communities, the members of which uphold the traditional values of these communities even while engaging in conversations which might change those values.[24] Let me begin a consideration of this by laying out the cluster of items in his perspective.

At the center is reality, which all our intellectual strivings attempt to comprehend at a steadily deeper level and in broader scope. I say "reality" with a small 'r' because Polanyi is a critical realist, aware that we can never attain a complete grasp of reality, and that our purchase on it is always somewhat tentative, because new experiences will undoubtedly lead us to revise our view of it.[25] Nevertheless, we can be confident of our claims about reality, claims that will be substantiated, we believe, in unforeseen ways in the future.
So human knowledge is genuine, but not complete or certain. It is personal.

Polanyi sees *striving* as a given of human life. We are incorrigibly restless, searching, curious, open to wonder. This root attitude or posture, which we share with all sentient life, becomes with language the source of all our articulate intellectual systems, from mathematics to art to religion.

Our striving engages with the world and constructs accounts of it, all involving a personal, tacit coefficient. This personal element is passionate, even at the highest levels of abstract thinking (mathematics), and the passion is a sign of our belief that we are in touch with reality, that we are seeing things that really are (even if not, "*as* they really are"). To state our reasons for knowing something, is to acknowledge the beliefs

which make such knowledge possible. Knowing is acknowledgment: "…the process of examining any topic is both an exploration of the topic, and an exegesis of our fundamental beliefs in the light of which we approach it; a dialectical combination of exploration and exegesis" (*PK*, 267).

This is a description of what we are doing when we evaluate competing intellectual systems on Polanyian grounds, and we can make its distinctiveness clearer by contrasting it briefly with the critical or objectivist perspective against which he argued. From that point of view, one subjects each competing system of ideas to a careful verification, assessing its conformity to the data, its internal consistency, its coherence with already established knowledge, and its fruitfulness for future discovery. This is done by consulting the published results of experimentation, of quantification of the data, of corroboration of the data by other experiments, and of casting of the results into a mathematical formulation – that is, by consulting the explicit forms of the claims being made. Having assessed each perspective in this way, one can then choose to affirm that view which has the highest "score" on these specific criteria.

What are the problems with such a procedure from Polanyi's perspective? First, it assumes one can stand outside both systems, and yet understand and evaluate each of them fairly. It assumes both systems can be evaluated according to the same set of criteria, in essentially the same way. It assumes the application of criteria to the system can be done formally and explicitly, in a way agreeable to everyone (including the adherents of both systems). Basically, the critical view assumes that concepts are free-standing, and can be made unambiguous with a little effort and care, so that one can evaluate them side by side in a straightforward way, like evaluating two types of carburetors to put in one's automobile.

Such an approach rarely works satisfactorily, and never works for deep conflicts. That is, adherents on both sides are not satisfied that the evaluation has been fair, and no one seriously contemplates surrendering their view for the other. The conclusion is that the evaluation process somehow doesn't engage the issues, that it is working on a different plane of thought than the adherents of the two views (or at least, different from one of them). (Consider, as an example, adherents of evolution and of scientific creationism.)

The virtue of Polanyi's approach is that he explains *why* such dissatisfaction exists, by "deconstructing" the critical ideal behind the evaluation procedure sketched above, showing that it is in fact impossible to do what it recommends. More precisely, while it is possible to evaluate conceptual systems by using the criteria mentioned above, such an evaluation does not lead to the clear-cut, equivalent comparison assumed by the critical paradigm, and so cannot render a decision for or against a particular view.

Of the many differences between the Polanyian and the objectivist views, I suggest that one of the most fundamental is Polanyi's "ecological" procedure in stressing the interconnectedness of all our thoughts and beliefs, their wholeness and mutual relationships, their network of implied meaning. The understanding of any one part necessarily involves an examination – to some degree – of the whole. To use a metaphor, objectivism wants to cut a pattern of ideas out of the whole cloth into which they are interwoven, and evaluate the pattern as this isolated piece. Once one decides on the logical soundness of the pattern, it is then sewn back into the cloth, allegedly making the cloth stronger. Polanyi's response is that we cannot "cut out" a portion of our ideas from the whole cloth of "articulate culture" without doing damage both to the portion and to the whole. The very pattern we are trying to evaluate literally unravels when torn out of the cloth. Or, in another analogy, this would be like pulling up a plant to examine its roots, and then assuming we can just stick it back in the ground and it will be fine, just like it was before, or even stronger because it has now been "verified."

These references to "ecology" and "whole cloth" imply once again the communal home of intellectual knowledge, and I want to say a few particular things about the communal, traditional ethos out of which Polanyi's thought moves. I can be most efficient by employing an essay of Dale Cannon on this theme.[26]

First, knowledge and community are reiprocally related, for, on the one hand, the way we know a comprehensive entity is through indwelling that entity through its particulars, and this is also the way in which we know other minds.[27] Thus an intellectual community is formed in the conviviality of those who share a focus on the same comprehensive entity.

Second, personal knowledge is thoroughly communal in being grounded in the beliefs of a community which accredits the knower's individual passionate affirmations. We claim to know a truth about the world because we have apprehended a reality which transcends our individual self, and it is the convivial order of those who share our values that accredits that claim: "The learner, like the discoverer, must believe before he can know. But while the problem-solver's foreknowledge expresses confidence in himself, the intimations followed by the learner are based predominantly on his confidence in others; and this is an acceptance of authority" (*PK*, 208).

Third, the traditional roots of personal knowing are revealed in the way in which our intimations of reality are received and then passed on to future generations, the first as students, the second as mature knowers.[28] Polanyi is persuasive that the educational background of intellectual life, which is a network of trust and obedience, is a logically necessary antecedent to the free thinking of the genius.

Fourth, our knowledge of reality is always only partial: "This view of science merely recognizes what all scientists believe – that science offers us an aspect of reality, and may therefore manifest its truth inexhaustibly and often surprisingly in the future."[29] Consequent upon this is that reality is "capable of revealing itself to an indefinite multiplicity of further viewpoints in unexpected ways" (Cannon, 8), and we are therefore dependent on others for the truths we receive, and those we explore. Our affirmations are but one thread in the cloth of knowledge, and depend upon others for completing this task, making the cloth a tapestry.

And finally, we overcome the threat of subjectivism in affirming our vision of the real with universal intent, depending upon future generations, yet unborn, to confirm the rightness of our work. Not only are we indebted to the past through our education, and to the worldwide community of seekers for the present state of knowledge, but to the future for exploring the implications of our affirmations into new discoveries of their own, thus confirming our beliefs.

Having traced in schematic form Polanyi's picture of knowledge embedded in community, I have to show finally how this communality of personal knowing helps resolve the struggle between competing systems of thought. Taking a clue from William Placher, I suggest that particular communities provide the appropriate place to begin conversations between competing ideologies, and that Polanyi is therefore exceptionally helpful in a pluralistic setting which is yet rife with suspicion.[30]

The predominant tendency in the western tradition has been toward identifying a universal "calculus" of value by which all disagreements could be adjudicated. Whether Plato's forms, or the revealed doctrines of Christianity, or the Scientific Method, or the Universal Reason of the Enlightenment, these standards were

believed to be clear to all rational people of good will, and served to demarcate acceptable from unacceptable ideas. Beginning in the nineteenth century with Marx, and continuing with the works of Kierkegaard, Darwin, Nietzsche, and finally Freud, a reaction to such monolithic standards set in; this reaction claimed that such standards cover up, under the guise of Truth, merely personal interests: economic power, or biological drives, or the desire for power, or instinctual needs. Lately, "political interests" have been added to the list of suspect motives, so that in the academy, at least, a claim to universal truth is usually quickly dismissed as dishonesty, and its details rarely examined. In such a climate, how does a person sustain his or her convictions, and how evaluate the convictions of others?

One promising suggestion is to avoid both the universalizing claim of absolute standards (or foundationalism), and the anarchy of cultural atomism, by the modest affirmation that intellectual discourse should begin where it always has, in the traditional communities in which people stand. Beginning *in media res* allows one to bracket the universal questions that so often end discussion even before it begins, and focus on the specific views which people hold in common – and there are always some. I do not need to know "the ultimate principle upon which my values lie" in order to talk with you about why I think gun control is a good idea, or why I think drilling for oil in Alaska is a risky idea, or why I think Nintendo is an acceptable risk in child raising. You will probably share some of my ideas, and reject others, but we will have little difficulty finding ways to talk about our conceptions in a way that is illuminating to both of us. These views do not float around in our minds, disengaged from other beliefs. If we stay at it long enough, we will find connections between these particular views and other, more basic values. Such connections, however, do not have to form a perfectly logical network of systematic claims, and our conversation can succeed in being meaningful and helpful without tracing these connections at all.

What we find when we are not under the spell of Universal Absolutes is that where we come from, and how we grew up, and where we studied, and our experiences, and the books we've read all contribute to a network of views that support our lives reasonably well. While we would all like, perhaps, to be more consistent and principled in living out what we believe, we feel fairly confident that our convictions *do* affect our behavior in tangible ways. Thus the tradition to which we belong, and the communities we participate in, provide a context within which meaningful intellectual activity can begin. Alasdair MacIntyre describes a tradition as "a historically extended, socially embodied argument," and in this sense we can affirm our tradition as having both past and future – it provides beliefs which have shaped us, but it can also develop and change in accordance with changes in historical circumstance.[31]

The fact that my father moved from his rural home to a coastal city during World War II so that he could work in a war-related industry (he was deaf in one ear from a hunting accident) meant that my family tradition was markedly different from that of my country cousins, with whom, nevertheless, I share a great deal. My choosing to be a college religion professor means that the family tradition which has shaped my sons is quite different from that which has shaped their cousins, whose fathers went into construction and into banking. And we could also note the significant ways in which my values have been molded by living through the Civil Rights movement and the Vietnam War, rather than the Great Depression and World War II, which so marked my parents. Though we were raised in the same household – in the same *room*, for several years! — I became a conscientious objector while my brothers went off to a military college. In these ways and a thousand others, each person is both given a set of beliefs and convictions, *and* taught unconsciously that traditions contain within them conflicting points of view, and so can change, can be reformed.[32] It is even the case, Gadamer argues, that the very prejudices, biases, and assumptions of a tradition, those "flaws" that the Enlightenment sought to

eradicate, are the necessary starting points for serious discussion, revealing as they do my ultimate convictions, and the confusions in those convictions.[33]

One of the reasons, Placher suggests, that traditions have epistemic importance is that they tell stories, narratives that place events and beliefs in a causal perspective, telling us why people now think as they do. This is one reason, it seems to me, that *PK* is so powerful: it tells the story of how reason went awry in the western tradition, and so explains why our philosophical views are so confused. Tradition may not be alone in caring about such things, but it is certainly a major source and inspiration for such insight.

Communities are groups of people who share a tradition, and who share common interests and concerns. Conversations begin at intersections of interests, where people find these shared concerns, and have enough tradition in common to understand one another's speech. Like knots in a net, these nodes of conversation connect us to other interests and concerns, so that genuine conviviality can develop. Polanyi's identification of certain characteristics of community may seem somewhat artificial, in that his focus was on the community of scientists. Reflection reveals, however, that those characteristics are broadly applicable to society at large and to other kinds of community, both intellectual and social.

Each person enters a conversation standing in a certain place, which gives him or her a particular angle of vision, and a particular "horizon of meaning."[34] As conversation continues, one's horizon changes, expanding or, perhaps, contracting, as one's conceptions of the world are altered. Discovery occurs when there is a "fusion of horizons," and meaning is transferred from one person to another. This seems to me quite similar to the "logical leap" which Polanyi posits as one moves from a previous conception of the world to a new one.[35] Thus conversation in community offers a setting in which rival conceptions of the real may be shared, without precluding the free consideration of each by those speaking. True, traditions can be oppressive, and one's past can enslave, rather than liberate, so this model of intellectual dialogue would have to be worked out further.[36] There seems no reason, however, that these dangers in tradition must be greater than the dangers of cultural anarchy or fanaticism. We must begin, after all, as adults who have grown up within a particular tradition; there is no other way to begin. We reach full maturity when we realize that standing within a tradition is the most powerful possible place from which to criticize that tradition, to reform it, to challenge it to live up to its most noble beliefs. For Michael Polanyi, this is just where we all stand, and so we can engage in intellectual debate with confidence that we are not faced with a false alternative of "conquest or death," but with a "hazardous opportunity for making some progress of our own towards an unthinkable consummation" (*PK*, 405).

Endnotes

[1] Thanks to Dale Cannon and an anonymous reviewer for perceptive criticisms of this paper. The faults that remain are entirely those of the author.

[2] Unless otherwise noted, all my references are to the Harper Torchbook edition of *Personal Knowledge* (1964), abbreviated *PK*. Polanyi uses a variety of terms to refer to a set of ideas, most commonly "conceptual framework" (*PK*, 151), "system of beliefs" (171), and "articulate framework" (195). He also speaks at times of "conceptions"(47), "perspectives"(59), and "speculations" (109), among others.

[3] Gerald Holton remarks that Polanyi referred to *PK* as his "big book." "Michael Polanyi and the History of Science," *Tradition and Discovery*, XIX:1 (1992-'93): 16-30; see p. 24.

[4] The original essay: Peter Winch, "Understanding a Primitive Society," in B. R. Wilson, ed., *Rationality* (Oxford: Blackwell, 1970): 78-111. A good overview of the discussion can be found in William C. Placher, *Unapologetic Theology:*

A Christian Voice in a Pluralistic Conversation (Louisville: Westminster/John Knox, 1989): 55-73. See also John Thiel, *Nonfoundationalism*, (Minneapolis: Fortress Press, 1994).

[5] Some of the most important features of such a map would include intellectual passions and their role in evaluation of ideas; contact with reality as the final grounding of any theory; various signs or criteria of truth (simplicity, profundity, regularity, etc. as forms of "intellectual beauty"); the communal nature of knowledge; the nature of the "logical gap" that separates rival conceptions. This paper is the first part of what I hope will be a longer project on this subject.

[6] This was Carl G. Hempel, *Philosophy of Natural Science*, Foundations of Philosophy series (Englewood Cliffs: Prentice-Hall, 1966).

[7] The quote is from Irwin Fridovich, "On Getting Close to Truth: A Scientist's Approach,"in the "How to Think Straight Series," *Duke Alumni Register*, Duke University, Durham, North Carolina, Volume 69, No. 1 (September-October 1982), p. 28.

[8] *PK*, 48, 102-04, 133-34, 142, etc.: "More generally, science, by virtue of its passionate note, finds its place among the great systems of utterances which try to evoke and impose correct modes of feeling. In teaching its own kinds of formal excellence science functions like art, religion, morality, law and other constituents of culture." (133) In his later writings, especially those in *Meaning* (1975), we see Polanyi attempting to apply these insights across culture generally.

[9] See in *PK*, for example, Ch. 5 on "Articulation," pp. 69-131 (esp. pp. 98 and 103), and p. 198.

[10] Lewis Thomas has argued something similar in "On the Uncertainty of Science," *Harvard Magazine*, (September-October 1980): 19-22: "I am willing to predict, uncertainly, provisionally, that there is one central, universal aspect of human behavior, genetically set by our very nature, biologically governed, driving each of us along. Depending on how one looks at it, it can be defined as the urge to be useful."

[11] *PK*, pp. 16-17, 40, 43, 46, 48.

[12] See *PK*, pp. 30, 53, 57, 112-113, 158, and 197.

[13] I offer as an example of this Paul Edwards' famous article, "Professor Tillich's Confusions," in *Mind*, Vol 74 (1965): 192-214.

[14] Polanyi gives the example of the mathematician Cantor's innovations, which "were so repulsive to Kroneker, who dominated German mathematics in the 1880's, that he barred Cantor from promotion in all German universities and even from having his papers published in any German mathematical journal" (*PK*, 190).

[15] As happened, for example, to Rosalind Franklin during the development of the double helix structure of DNA. See James Watson, *The Double Helix* (NY: New American Library, 1968), pp. 20-21, 142-43.

[16] See especially pp. 160-171 of *PK*.

[17] Other obstacles not discussed here include the fact that one does not understand the language of a new conception, and so cannot understand it; the fact that the more we lay out a rival's claims explicitly, the less intelligible it may become, due to the personal co-efficients which are necessary to grant it intelligibility (*PK*, 119); that the authority of the community must be modified in order to accommodate a new conception, and such authorities are by nature conservative; and the fact that commitment to a belief about the world is undergirded by a convivial order, and developing such conviviality with our intellectual rivals is difficult (*PK*, 203, 21-211). Again, *PK* as a whole is a sustained statement on this issue.

[18] Dale Cannon pointed this out to me, indirectly, for which I am grateful.

[19] Though I have not attempted to make full use of his helpful volume, readers should note Andy Sanders' discussion of this issue in *Michael Polanyi's Post-Critical Epistemology: A Reconstruction of Some Aspects of 'Tacit Knowing'* (Amsterdam: Rodopi, 1988), especially in chapters 5 and 6.

[20] A partial list of the cases referred to is given by Polanyi in *PK* on p. 160; it refers to "Copernicus and his opponents; Kepler and Einstein; Laplace and John Dalton; Hegel and Bode; de Broglie and Dirac; van't Hoff and Kilbe; Liebig and Pasteur; Elliotson and Braid; Freud, Eddington, Rhine and Lysenko." In addition, he also refers to Marxism and to Impressionist painting.

[21] *Science, Faith, and Society* (Chicago, 1964), hereafter *SFS*, was originally published in 1946. A deeper treatment of Polanyi's understanding of tradition and community would also employ *The Contempt of Freedom* (1940), *The Logic of Liberty* (1951), the first five essays in *Knowing and Being* (1969), and chapters 12 and 13 of *Meaning* (1975).

[22] Polanyi endorses Augustine's maxim that we must first believe in order to understand (*PK*, 266), or, in another wording which I prefer, we can only know what we love.

[23] Polanyi's historical approach to science, and his "thick" description of human knowing, honor the context

within which all knowledge occurs and is interpreted. But he does not believe that language communities are isolated within their distinctive "language-games," unable to argue with the larger culture, with other cultures, or with history generally. See Sanders, *Michael Polanyi's Post-Critical Epistemology*, p. 208: "Contrary to what Popperians and even a number of Polanyians seem to think, Polanyi does not advocate radical relativism, nor does his position entail the theoretical or practical impossibility of criticism."

[24] I have adumbrated some of these ideas in a 1996 lecture, "What Really Matters? Conversation in Community," published by Furman University as *L.D. Johnson Memorial Lectures, 1995-'96* (Greenville, SC): 13-32. That lecture is heavily indebted to H. Richard Niebuhr, whose *Faith on Earth* draws on Polanyi, and is relevant to this present paper. *Faith on Earth: An Inquiry into the Structure of Human Faith*, ed. Richard R. Niebuhr (New Haven: Yale University Press, 1989).

[25] This is my shorthand way of speaking about the complicated issue of Polanyi's realism. See the thematic issue of *Tradition and Discovery*, edited by Andy Sanders and dedicated to this topic: Vol. XXVI: 3 (1999-2000): 6 -70.

[26] I am indebted to an article by Dale Cannon for alerting me recently to this communal dimension of Polanyi'sthought. See "Toward the Recovery of Common Sense in a Post-critical Intellectual Ethos," *Tradition and Discovery*, XIX:1 (1992-93): 5-15 [hereafter cited as Cannon]. He bears no responsibility, of course, for my use of his ideas! In relating Polanyi's thought to a need to re-constitute common sense in the university, Cannon notes (p. 8) a number of Polanyian themes relevant to seeing sense "in common," which are the basis for my treatment:

> . . . our knowing of a comprehensive entity through indwelling and our knowledge of other minds through indwelling, that taken together make possible a "meeting of minds" in convivial mutuality concerning the given comprehensive entity; higher order forms of knowledge being grounded essentially in a convivial order whose accreditation becomes the basis of one's self-accreditation of competence; reality as being inexhaustible to any one viewpoint, and as capable of revealing itself to an indefinite multiplicity of further viewpoints in unexpected ways; knowing as an adventure of following up intimations of hidden truth – personal intimations of truth-in-common which call forth the services of the individual knower for revealing it and making it known-in-common; and the way in which our affirmations of our respective findings are always made with universal intent, appealing to a mutual, confirming recognition from future independent inquirers into the same matters.

[27] See "The Structure of Consciousness" in *Knowing and Being* (Chicago: University of Chicago Press, 1969), pp. 211-224, for Polanyi's fullest statement of this.

[28] "…the authority to which the student of science submits tends to eliminate its own functions by establishing direct contact between the student and the reality of nature. As he approaches maturity the student will rely for his beliefs less and less on authority and more and more on his own judgement. His own intuition and conscience will take over responsibility in the measure in which authority is eclipsed." (*SFS*, 45)

[29] Michael Polanyi, *The Tacit Dimension* (NY: Doubleday Anchor: 1967), p. 69. See also *PK*, 373-380.

[30] Placher, op cit.

[31] MacIntyre's definition is from *After Virtue: A Study in Moral Theory* (Notre Dame, IN: University of Notre Dame Press, 1980), p. 207, cited in Placher, p. 108.

[32] Placher, pp. 108-110.

[33] Placher discusses on pp. 111-112 these ideas as they appear in Hans-Georg Gadamer, Philosophical Hermeneutics (Berkeley, CA: University of California Press, 19750, p. 9

[34] The term is Gadamer's, from *Truth and Method* (NY: Seabury Press, 1975), p. 269; quoted in Placher, p. 111.

[35] Placher, p. 112. Polanyi's 'logical gap' is discussed in *PK* on pp. 123-130, 242, 261, 319, 322-23, etc.

[36] This was Jurgen Habermas's criticism of Gadamer. Placher, pp. 113-114.