

Polanyi's Participative Realism

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I. Introduction

Michael Polanyi was a physical chemist who turned to philosophy in middle age as he became interested in the relationship between political authority and the scientific community. He eventually worked out an epistemology which he put forth as an alternative to prevailing ideas at mid-century about scientific practice. His epistemology is elaborated as a comprehensive philosophical vision which includes a *Lebensphilosophie* as well as vision of the evolving cosmos[1]. While Polanyi published quite a number of books and articles that clearly fall within the domain staked out by professional philosophers, it is also true that Polanyi's work has been largely ignored by philosophers. Polanyi did not direct his writing primarily toward philosophers; he did not make it a priority to participate in philosophy's on-going professional conversation as it might be understood by an insider[2]. His career as a philosopher was, as he terms it, something of an afterthought[3]. Certainly, Polanyi did come to have a macroscopic reading of the developing Western philosophical tradition and he was himself as speaking to the large issues. But rather than a guild member, Polanyi was a reflective scientist with a broad liberal education, eclectic interests and unusual philosophical acumen. Many of Polanyi's philosophical conclusions probably seem less strange to philosophers today than they did forty years ago. As others have noted, thinkers located more centrally within the context of emerging discourse among philosophers have now put forth perspectives similar to Polanyi[4].

Because Polanyi was an eclectic figure who did philosophy outside the mainstream, it is interesting to examine his thought in terms of some traditional philosophical categories. This essay attempts carefully to describe and make sense of the *clair* type of realist that Polanyi seems to be[5]. Most readers notice the odd way in which the term „reality” is used by Polanyi. Indeed, this is a curious and intriguing aspect of his thought. Two further puzzles make a discussion of Polanyi's realism of particular interest. First is the fact that there has been, for over a decade, a debate about how to understand Polanyi's ontology and particularly his ideas about the status of artistic and religious knowledge[6]. The questions at issue remain alive, as articles in *Tradition and Discovery: The Polanyi Society Periodical* by Harry Prosch, an American philosopher who co-authored Polanyi's last book treating art and religion, and Aaron Milavec make clear[7]. The key issues in the debate I believe turn on how to interpret Polanyi's many references to reality. At the end of my discussion of Polanyi's realism, I comment upon Prosch's interpretation of Polanyi. Finally, I note that my examination of Polanyi's realism grows in part out of an interest in the fascinating similarity between several of Polanyi's philosophical positions and those of Charles Sanders Peirce, another philosopher-scientist a generation older than Polanyi and a thinker who declares himself to be an extreme realist[8]. Although the links with Peirce can only be a subtext hinted at here, my

treatment of Polanyi's realism may be suggestive to those mining the classic American philosophical tradition[9].

II. Reality and Knowledge

Any attempt to ferret out the character of Polanyi's claims about the nature of scientific knowledge must quickly reckon with the fact that Polanyi is quite comfortable linking knowledge and „reality”. Those things that are real are preeminently meaningful[10].

Polanyi's vision of science contends that what scientists discover are aspects of reality: „*Scientific knowing consists in discerning Gestalten that are aspects of reality*”[11]. In his 1963 introduction to the new edition of *Science, Faith and Society*, Polanyi makes several comments about how he understands „reality”. He indicates that natural laws are real and true:

To hold a natural law to be true is to believe that its presence will manifest itself in an indefinite range of yet unknown and perhaps yet unthinkable consequences. It is to regard the law as a real feature of nature which, as such, exists beyond our control[12].

Polanyi suggests that he has worked out „a new definition of reality”:

Real is that which is expected to reveal itself indeterminately in the future. Hence an explicit statement can bear on reality only by virtue of the tacit coefficient associated with it. This conception of reality and of the tacit knowing of reality underlies all my writings[13].

On more than one occasion, Polanyi makes comments like this about the character of what we term „real”. He sometimes uses the phrase „aspect of reality” to refer to a „real” entity which is a part of some larger, collective („reality”) that is diverse[14]. The emphasis in Polanyi's definition of „real” is upon the future, upon the expectation of surprising significance. Real things are what we anticipate to be implicatively rich or fecund, though not all real things are expected or found to be equally rich; the most deeply real things seem to be the most complex comprehensive entities which Polanyi frequently describes in terms of their presently unanticipated future potential manifestations. Rather than being born out of a struggle with medieval philosophy and modern philosophical debates, it seems likely that the genesis of Polanyi's ideas about „reality” come primarily from his experience as a research scientist [15]. Because they pour themselves into problems, scientific inquirers, Polanyi contends, become committed to complex realities whose implications are largely undisclosed or concealed. Only future inquiry can show (and has shown) that earlier intimations were indeed on target, though perhaps in ways quite unexpected.

Polanyi also asserts (in the quotations above) that tacit coefficients are what make meaningful any explicit statements about real things. He steadfastly insists that discourse about reality cannot be cut off from what Poteat terms the foundational „mindbodiliness” of persons[16]. The human way of being in the world must be acknowledged as a first presumption. Polanyi refuses to slip into an idiom which speaks about what we affirm to be real without acknowledging that human skills and values are always bound up with our speaking. For Polanyi, persons are deeply involved in the world and with fellow creatures; it is only through indwelling (by interiorizing) that we can make explicit statement about those things we believe to be real.

In „The Logic of Tacit Inference” (1964), an essay written during the same period that he produced his new introduction for *Science Faith and Society*, Polanyi discusses the character of real things in language interestingly different than that used in the new introduction. Here he identifies what he terms „the *ontological claim* of tacit knowing”:

The act of tacit knowing thus implies the claim that its result is an aspect of reality which, as such, may yet reveal its truth in an inexhaustible range of unknown and perhaps still unthinkable ways.

My definition of reality, as that which may yet inexhaustibly manifest itself, implies the presence of an *indeterminate* range of *anticipations* in any knowledge bearing on reality. But besides this indeterminacy of its prospects, tacit knowing may contain also an *actual knowledge* that is indeterminate, in the sense that its content *cannot be explicitly stated*[17].

Again in this formulation there is the suggestion that that which is real exerts power. That power presently impacts humans and convincingly leads humans to anticipate a future impact, although the character of that future impact remains open. Acts of knowing make an ontological reference. Those things which are real are thus presently accessible to human knowers, but they have indeterminate prospects. Further, our actual knowledge, our knowledge at any given time, of real things can never be fully explicit; actual knowledge remains indeterminate in that all explicit claims are grounded in tacit presuppositions, that is, in subsidiary particulars not before the mind’s eye. Polanyi’s interest in the indeterminate range of meaning of real things might be termed the polyvalent aspect or focus of his realism; his interest in the tacit foundation of knowledge of real things (i.e., the second indeterminacy) can be partially distinguished from the polyvalent aspect by terming this the bodily or incarnate aspect or focus of Polanyi’s realism.

III. The Independence of Real Things

By considering further the ways in which Polanyi speaks about real entities and their independence, it is possible to clarify aspects of both the polyvalent and bodily aspects of Polanyi’s realism.

In „The Logic of Tacit Inquiry” (in the quotation above) as well as in other discussions, Polanyi often adopts an idiom to discuss real things which to some degree animates them (e.g., „inexhaustibly manifest itself”). Polanyi does not follow the ancient Greeks in positing soul (that which is self-moving, according to Plato in *Phaedrus* 245), but he does seem to believe, like Plato, that the mark of the real is power. Power is represented by personifying. Those things that are real thus often are portrayed as agent-like things possessing their own initiative. One of the artiest and most interesting passages with this motif is in *Science Faith and Society*: Polanyi argues that all creative guess work (which includes not only scientific and mathematical work but also „the prayerful search for God”[18]) „have in common that they are guided by the urge to make contact with a reality, which is felt to be there already to start with, waiting to be apprehended”[19]. This leads Polanyi to speculate that discovery in science is „guided not so much by the potentiality of a scientific proposition as by an aspect of nature seeking realization in our minds”[20]. Polanyi probably would not have put matters quite this way later in his philosophical career after he worked out the details of his theory of tacit knowing. Nevertheless, a sense of the power of that which is real is an important idea in all of Polanyi’s writing. The root metaphor which seems to attract Polanyi is an image of reality as a continuous series of independent entities or discrete aspects; this is an appealing image because it strongly emphasizes both the power and the relational aspect of that which is real[21].

As noted above, according to Polanyi, there are important significant differences among real things and the matter of potency is related to such differences. Polanyi is quite comfortable in affirming that some things are more deeply real than others:

This capacity of a thing to reveal itself in unexpected ways in the future I attribute to the fact that the thing observed is an aspect of a reality, possessing a significance that is not exhausted by our conception of any single aspect of it. To trust that a thing we know is real is, in this sense, to feel that it has the independence and power for manifesting itself in yet unthought of ways in the future. I shall say, accordingly, that minds and problems possess a deeper reality than cobblestones, although cobblestones are admittedly more real in the sense of being *tangible*. And since I regard the significance of a thing as more important than its tangibility, I shall say that minds and problems are more real than cobblestones. This is to class our knowledge of reality with the kind of foreknowledge which guides scientists to discovery[22].

Here Polanyi suggests that reality has different manifestations which include at least tangibility and significance. Tangibility, however, is actually a kind of significance. The distinction Polanyi seems to be reaching for is one that recognizes levels of profundity. Polanyi’s analysis in *The Study of Man* sketches, in a parallel fashion, a range of disciplinary inquiry, each with its own excellence; but he contends that the study of dramatic history is engaging for human beings in a way that no other kind of study can be. Similarly, in comments throughout *Personal Knowledge* about knowing progressively more complex forms of life, Polanyi suggests there is a gradient of reality. Thus Polanyi often seems to envision a

graduated scale of types of meaning which he correlates with different aspects of reality. Minds and complex problems, though lacking tangibility, are regarded as deeply real because they are strongly indeterminate entities. In his 1962 essay „Tacit Knowing: Its Bearing on Some Problems in Philosophy”, Polanyi characterises the nature of knowing another mind in just this way:

... as we move to a deeper, more comprehensive, understanding of a human being, we tend to pass from more tangible particulars to increasingly intangible entities: to entities which are (partly for this reason) more real: more real, that is in terms of my definition of reality, as likely to show up in a wider range of indefinite future manifestations[23].

Cobblestones and other merely tangible things are certainly recognized by Polanyi as independently existing physical entities, but such entities, as merely physical presences, are real only in a simple way; they have limited interest for and power to affect human beings. Minds and complex problems, because they have a broader potential to affect persons, are complex, dynamic realities.

Polanyi contends that the lack of tangibility of more deeply real entities is prominent in science. He also frequently stresses that complex, dynamically real entities, although largely intangible or hidden, are confidently regarded as present by those who seek and discover them.

But it is still the course of scientific inquiry in which the metaphysical conception of a reality beyond our tangible experiences is written out most clearly, for all to see. From its start, the inquiry assumes, and must assume, that there is something there to be discovered. The fascination, by which alone the inquiry can make progress, is fixed on discerning what it is that is there, and when discovery is achieved, it comes to us accredited by our conviction that its object was there all along, unrecognized[24].

The intangibility of complex real things is not a liability or impediment to inquiry but serious inquiry requires that such intangible real entities are recognized at least in the sense that such entities are respected and entertained as significant[25].

Finally, it is worth noting that Polanyian notions about the gradient of reality distinguishable in terms of depth of implication are sometimes articulated in terms of respect for the inherent vagueness of certain comprehensive entities:

But tacit knowing is indispensable and must predominate in the study of living beings as organized to sustain life. The vagueness of something like the human mind is due to the vastness of its resources. Man can take in at a glance any one of 10^{40} different sentences. By my definition, this indeterminacy makes mind the more real, the more substantial[26].

Polanyi's ideas about the hierarchy of significance among real entities can be succinctly summarized by saying that those things that are real are preeminently signifiers[27]. Some real things, such as challenging problems and minds, are more deeply real in that they are richer signs which hold the potential to generate a whole field of meaning or future significance not presently recognized.

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Notes

1. Although there were several later publications, *Personal Knowledge: Towards A Post-Critical Knowledge* (New York: Harper & Rox, 1958), the book based upon Polanyi's Gifford Lectures in the early fifties, remains his *magnum opus*. Because Polanyi's mid-century account of science focuses upon scientific practice, he should be regarded as a forerunner of figures such as Thomas Kuhn. Works by Polanyi are cited by title abbreviation and page after the first reference; works by other authors are cited by author and page after the first reference.
2. Some professional philosophers, notably Marjorie Grene, did take a serious interest in Polanyi's thought during his life time. Archival correspondence indicates that, from the period in which she helped produce *Personal Knowledge*, Grene played a role in shaping Polanyi's developing ideas. At the least, she often instructed Polanyi about philosophical allies and enemies and criticized his ideas.
3. Michael Polanyi, *The Tacit Dimension* (Garden City, N.Y.: Doubleday & Co., 1966), 3. For a somewhat broader account of the way in which Polanyi Understands his own development, see Polanyi's 1963 introduction to his 1946 volume *Science, Faith and Society* (Chicago: University of Chicago Press, 1964), 7-19. For a full discussion of Polanyi's career in relation to his philosophical ideas, see Richard Gelwick, *The Way of Discovery: An Introduction to the Thought of Michael Polanyi* (New York: Oxford University Press, 1977) and Harry Prosch, *Michael Polanyi: A Critical Exposition* (Albany, N.Y.: SUNY Press, 1986).
4. See the discussions of Polanyi and other thinkers in David Rutledge, et. al., „The Tacit Victory and the Unfinished Agenda” *Tradition and Discovery: The Polanyi Society Periodical*, XVIII: 1, 5-17.
5. This essay is not the first consideration of this topic. The germ for my essay was a paper I delivered at a roundtable session at the 1991 American Academy of Religion. Thanks go to Andy Sanders who alerted me, in discussing my paper, to the existence of Ester L. Meeks 1985 dissertation at Temple University „Contact With Reality: An Examination of Realism in the Work of Michael Polanyi” as well as his own comments on Polanyi's realism in his book *Michael Polanyi's Post-Critical Epistemology: A Reconstruction of Some Aspect of Tacit Knowing* (Amsterdam: Rodolphi, 1988). Also John Puddefoot's essay „Resonance Realism” published in 1994 in *Tradition and Discovery* (XX:3, 29-39) in the period in which I was the journal editor is an important discussion of Polanyi's realism. How to construe

Polanyi's realism is not a settled matter. While I appreciate the perspectives of Meek, Sanders and Puddefoot, I have followed my own interpretative inclinations. As will become clear below, my approach has learned much from Charles Sanders Peirce's semiotic realism.

6. An exchange was initiated by Harry Prosch's review (*Ethics* 89 (January 1979), 211-216) of Richard Gelwick's *The Way of Discovery: An Introduction to the Thought of Michael Polanyi*. The discussion spilled over into meetings of the Polanyi Society held in conjunction with the Americal Academy of Religion in North America in the early eighties; a special edition of *Zygon* (17:1 (1982) on science and religion in Polanyi's thought published important contributions to the discussions. My comments below cite particular relevant articles in the *Zygon* issue as well as some other relevant material in *Tradition and Discovery: The Polanyi Society Periodical* and other journals.

7. Harry Prosch, „Those Missing ‘Objects‘ „, *Tradition and Discovery: The Polanyi Society Periodical*, XVII: 1&2, 17-20. Aaron Milavec's „Appendix on Polanyi's Understanding of Religion” which is attached to his 1997 article in *Tradition and Discovery: The Polanyi Society Periodical* (XXIII:2, 35-36) also cites some of the literature in the early eighties in the *Convivium*, the former publication of the Polanyi studies group centered in Great Britain. Other publications, including my earlier article „Religious Meaning in Polanyi's *Personal Knowledge*” in *Polanyiana* (Vol. 2., No. 4, 1992/Vol. 3, No. 1., 1993, 75-83) more indirectly touch the concerns outlined in the early debate.

8. See the excellent discussion in Michael Raposa, *Peirce's Philosophy of Religion* (Bloomington, Indiana: Indiana University Press, 1989), 14-25.

9. John E. Smith's article „Community and Reality” (*The Relevance of Charles Peirce* ed. Eugene Freeman [LaSalle, IL: Monist Library of Philosophy, 1983], 38-58) summarizes Peirce's claims about reality around three points:

... first, the idea that reality has some sort of *independence* of being thought or represented; second, the idea that reality is related to thought and ideas in some essential way; and third, the idea that reality is the ultimate result of a process of inquiry and is in some sense to be identified with the fact that those who conduct the inquiry come to believe or accept this result (40).

Smith notes that Peirce wanted to be a realist, an idealist and a pragmatist at the same time. There are some tensions in his attempt to construct a coherent theory of reality. Certainly there are also some tensions in Polanyi's ideas about reality. As my discussion will show, there are parallels in Polanyi's perspective to all three foci which Smith identifies.

10. Edward Pols' article „The Problem of Metaphysical Knowledge” in an early *festschrift* (*Intellect and Hope: Essays in the Thought of Michael Polanyi*, eds Thomas Langford and William Poteat, [Durham, NC: Duke University Press, 1968], 58-90) discusses four nuances of „reality” in Polanyi's work. Pols' article is written before the publication of Polanyi's *The Tacit Dimension* and Polanyi and Prosch's

Meaning, although he does refer to the Duke lectures on which *The Tacit Dimension* was based. Pols does identify degrees of meaningfulness as one of the concerns which Polanyi's sense of „reality” tries to include (77-78). However, Pols does not properly understand and emphasize the link between „reality” and meaning in Polanyi. As will become apparent, the reading of Polanyi developed here is a semiotic reading whereas Pols' discussion (as his title implies) focuses upon the character of metaphysical knowledge in Polanyi. Pols does offer some perspectives similar to those articulated here and I below make some references to his insights. In the final analysis, however, Pols' article offers a critique of Polanyi for not having more to say about Being.

11. *SFS*, 10.

12. *SFS*, 10.

13. *SFS*, 10.

14. Polanyi's comment in the opening chapter of *SFS* is a plural instance of this usage: „The vast growth of science in the last 300 years proves massively that new aspects of reality are constantly being added to those known before” (10). Pols (78-80) also comments upon Polanyi's use of this phrase in the singular: „The expression usually seems to mean that one physical theory reveals some true things about nature, another physical theory other things, without there necessarily being a distinction in the ontological import of what is revealed” (80). I think Pols is correct but it is also important to recognize Polanyi's interest in the relationship among the „aspects of reality”.

15. Polanyi could perhaps have profited, as did Charles Sanders Peirce, from such a struggle. Peirce is thoroughly familiar with medieval discussions. Nevertheless, Max Fisch (*Peirce, Semiotic and Pragmatism: Essays by Max H. Fisch* [Bloomington: Indiana University Press, 1986], 3) contends that, for Peirce, the basic issue between nominalism and realism concerned whether laws and general types were real. Peirce lived in an era when many scientists and philosophers about the character of scientific law, Peirce is interested in some of the same issues with which Polanyi struggles. See also Frisch's discussion (184-200) of Peirce's development from an early nominalist position to a realist position.

16. William H. Poteat, *Polanyian Meditations: In Search of a Post-Critical Logic* (Durham: Duke University Press, 1985), 15-26.

17. Michael Polanyi, *Knowing and Being: Essays by Michael Polanyi*, ed. Marjorie Grene (Chicago: University of Chicago Press, 1969), 141.

18. *SFS*, 34.

19. *SFS*, 35.

20. *SFS*, 35.

21. As the following comment shows, Peirce too seems to have put a dominant emphasis upon the power of those things that are real:

If all things are continuous, the universe must be undergoing a continuous growth from non-existence to existence. There is no difficulty in conceiving existence as a matter of degree. The reality of things consists in their persisting forcing themselves upon our recognition. If a thing has no such persistence, it is a mere drem (l. 175).

John E. Smith summarizes this emphasis in Peircean realism with a comparison with Hegel:

Unlike Hegel, who emphasized the utter transparency of all reality to reason, Peirce was insistent on the *forcefulness* or otherness of things as a mark of reality. In Peirce's terminology, reality belongs with Secondness, or the domain of fact (41).

Further discussion of the relational aspect of Polanyi's ideas about reality follows in my discussion of comprehensive entities. Quotations from Peirce are by volume and paragraph (right of the decimal) from *The Collected Papers*, eds. Charles Hartshorne and Paul Weiss (Cambridge, Massachusetts: Harvard University Press) 1965.

22. *TD*, 32-33.

23. *KB*, 168.

24. *KB*, 172.

25. This is a variation on the problem of *Meno* or debater's paradox, which Polanyi commented on in *TD* and in other late essays.

26. *Kb*, 151. Although he recognizes the vagueness of complex real things, Polanyi clearly indicates that such vagueness is not merely a matter of language understood as a set of convenient symbols. In fact, Polanyi was quite critical of what he regarded as the nominalistic underpinnings of most philosophical views of language at mid century. He criticized views emphasizing the „open texture” of terms, claiming it is necessary to accredit a „speaker's sense of fitness for judging that his words express the reality he seeks to express” (*PK*, 114). Interestingly, Peirce, like Polanyi, took vagueness with a certain seriousness. In his semiotics, Peirce works out a careful understanding of the nature of that which is vague. See the discussion in Mihai Nadin's „The Logic of Vagueness and the Category of Synechism” (*The Relevance of Charles Peirce*, ed. Eugene Freeman [La Salle, IL: Monist Library of Philosophy, 1983], 154-166) and Michael L. Raposa's „The Fuzzy Logic of Religious Discourse” (forthcoming in *American Journal of Semiotics*).

27. Peirce, like Polanyi, argues that real things are primarily to be considered as significative in nature:

But, in fact, a realist is simply one who knows no more recondite reality than that which is represented in a true representation. Since therefore the word „man” is true of something, that which „man” means is real (5.312)

Now the problem of what the „meaning” of an intellectual concept is can only be solved by the study of the interpretants, or proper significant effect, of signs (5.475).

... real things are of a cognitive and therefore significative nature, so that the real is that which signifies something real. Consequently, to predicate anything of anything real is to predicate it of that of which that subject (the real) is itself predicated, for to predicate one thing of another is to state that the former is a sign of the latter (5.320).

As the final sentences here imply, Peirce works out in some detail in his semiotics the connection between real things and thinking which depends upon signs. Polanyi does not work out a full blown theory of signs, although there are some interesting suggestions in „Sense-Giving and Sense-Reading”, a 1967 essay included in *Knowing and Being* (191-210) which includes a reference to Peirce. Peirce’s realism, like Polanyi’s, focuses upon the rational, logical, futural and social character of meaning.

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