

# Border Crossings

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## Assessing Nye's Assessment of *Personal Knowledge*

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New introductions to familiar texts are always interesting but seldom lend themselves to exhilarating discussion. Mary Jo Nye's foreword to the "enlarged edition" of *Personal Knowledge*, brought out by the University of Chicago Press in 2015, may prove to be an exception to the rule. On the one hand, it is capable, well-written, and helpful. It does exactly the things that an introduction is supposed to do, and does them graciously and accurately. On the other hand, this foreword is not free of subtle forms of cognitive dissonance, and Nye here and in her 2011 book *Michael Polanyi and His Generation*, makes a number of claims about *Personal Knowledge* that are contestable enough to generate lively discussion.

### 1. A "classic" in what sense?

The most notable point of cognitive dissonance concerns the status of *Personal Knowledge* as a "classic." No author can be held accountable for the marketing blurbs on the back cover, but I was struck in this case by what looks like a flat out contradiction. The paragraph on the back cover announces that "*Personal Knowledge* remains one of the most significant philosophy of science books of the twentieth century." Nye, in contrast, writes in her first paragraph that the book "is not a classic of philosophy" (xi), a claim that creates the frame within which she considers Polanyi's contribution. Nevertheless, she curiously grants that nonetheless "it is a classic work" (xi). I do not think Nye ever quite clarifies this odd distinction.

She does not consider it a "classic of philosophy" because "most professional philosophers" do not do not teach it or reference it—none of Polanyi's most influential themes ("tacit knowledge, levels of knowing, intuition, skills, and performance") have made their way into the discourse of "formal philosophy" (xi). She does not directly address the question of whether it is a classic in the more limited landscape of the philosophy of science, but it is pretty clear that she does not consider it a classic in that narrower field either. In the foreword, she offers a non-evaluative brief comparative discussion of Karl Popper, Stephen Toulmin, Thomas Kuhn, and Polanyi on page xxiii; in *Michael Polanyi and His Generation*, Nye offers an evaluative chapter on "Political Foundations of the Philosophies of Science of Popper, Kuhn, and Polanyi," which also brings Paul Feyerabend into the discussion. Her remarks in her book make it pretty clear that she considers Kuhn's philosophy of science to be superior to that of either

Popper or Polanyi. At the end of that “Political Foundations” chapter, she writes that the philosophical arguments of Polanyi and Popper “were first made and clearly stated in their earlier political writings” (255), and their “politically inspired work was widely disseminated through newspaper articles, intellectual periodicals, and the BBC” (256), overshadowing Kuhn’s philosophy of science at the time. Nonetheless, she contends that it was Kuhn’s *Structure of Scientific Revolutions* that was “the most readable and the most read” (256). She suggests that “it is precisely the absence of an impassioned and explicit political agenda that is the key to the power, adaptability, and longevity of Kuhn’s short, synthetic interpretation of the nature and practice of science” (256). In contrast, *Personal Knowledge* had only “limited success with philosophers of science” (257). In the foreword she offers a purely informational footnote acknowledging the “debate” among “Polanyi scholars” about “the intellectual debts that the younger Kuhn may have owed Polanyi” (xxiii–xxiv n. 4). In her discussion of Kuhn’s development in her book, however, she relies on Kuhn’s own account to describe Polanyi as a negligible influence on Kuhn. During the 1950–1951 academic year, Kuhn reports having read some of Polanyi’s arguments—that these included *Science, Faith and Society* would be consistent with that volume’s publication date and Kuhn’s much later 1967 letter to William Poteat, acknowledging early familiarity with both that volume and *The Logic of Liberty*. Nye speculates that he may also have examined some of Polanyi’s pamphlets—“Rights and Duties of Science,” “The Planning of Science,” and “The Foundations of Academic Freedom” (240). Beyond those works—some parts of which Kuhn found helpful and some parts of which made Kuhn quite wary—the only other credible point of influence that Nye records is Kuhn’s presence, during the 1958–1959 academic year, at a talk by Polanyi on tacit knowledge. In 2000, Kuhn recalled having “liked” Polanyi’s argument but doubted that it had played any role in the development of his own position. While Nye acknowledges Polanyi’s complaint to colleagues “that he had not received proper recognition from Kuhn” (243), Nye clearly does not believe that to be true. She portrays parallel developments that do coincide in some notable ways but that differ just as notably. Kuhn’s work was soundly grounded in the philosophical conversations of the time and Polanyi’s was not.

Why, then, concede that the book nevertheless is a “classic”? In the last paragraph of the foreword, Nye writes, “The book has remained a classic that is read because of the multiple ways in which it addresses questions at the heart of how we learn, how we know, and how we live. . . . It challenges the reader to debate the tension between the rationalist ideal of value-free knowledge and the humanist ideal of ethically responsible knowledge” (xxv). But is anyone in our “postmodern” academic world still having a debate about the possibility of value-free knowledge? I cannot name a single contemporary author in the past fifteen years who has argued that there is such a thing as value-free knowledge. I suppose this might say more about my choice of reading than about the academy, but my strong impression is that that paradigm has shifted inexorably. If the claim of *Personal Knowledge* to contemporary attention rests primarily on his case against value-free knowledge, then the book is less a classic than a historical footnote. And if philosophers who investigate “how we know” (and are teaming up

with neuroscientists to investigate “how we learn”) do not read it, and if her measure of a classic in philosophy is its audience among philosophers, how is it a classic because it addresses those questions?

The key seems to lie in her contention that *Personal Knowledge* “was adopted and adapted in the late 1960s and 1970s to very different meanings from his original intentions” (257). Distilling the analysis she offers in the chapter on *Personal Knowledge* in her book, Nye notes in the opening of her foreword that today “*Personal Knowledge* is read equally as a resource for discussions of complexity theory, emergent systems, faith, and values”; it finds its contemporary home in “sociology, political science, psychology, economics, theology, and education” (xi). Elsewhere in the foreword, she argues that *Personal Knowledge* was extremely influential in the development of the sociology of science and provided important impetus for the development of the field of “science studies,” which she dates from the 1970s (xxiv). This analysis, however, generates further questions:

- If she is right that *Personal Knowledge* “revolutionized the sociology of science” (xxiv), is it proper to say that this represents something contrary to his intentions?
- Does it make sense to speak of a classic that has no defined disciplinary home?
- How well does this analysis of Nye’s treatment of the reception and influence of *Personal Knowledge* accord with the rationale she gives in her last paragraph for describing it as a classic in her last paragraph?

I will return to those questions, but first let me review Nye’s own stated intentions with respect to this foreword. She first undertakes to place the book in its proper historical context. She then turns to the task of identifying the “themes that reverberate beyond its original context and writer” (xi).

## 2. Author and text in historical context

Nye analyzes the book’s “mooring” in the 1950s by way of a study of “Polanyi’s own experiences and preoccupations” and “the preoccupations that compelled him to write a book on scientific life” (xii). She describes it as “a very personal book” (xii). She means that benevolently even, perhaps, as a compliment—the “personal” nature of the book “exemplifies Polanyi’s theme of the personal nature of knowledge” (xii). Yet there is something worrisome about this subtle collapsing of the personal into the idiosyncratically individual, even in the case of an individual acknowledged to be wrestling muscularly with the *Zeitgeist*. While it is true that Polanyi’s treatment of the personal character of all knowledge claims does encompass the recognition of the impact of social location on the one who makes the claims, his treatment of the “personal” also—and more importantly—insists that the verification or validation of knowledge claims rests, finally, in the activity of informed judgment and testimony on

the part of persons capable of skillful discernment within the framework of a communally developed, articulated, and authenticated system of self-set standards—a system of standards that is transmitted by persons to persons by apprenticeship across generations. Inasmuch as the importance of social location is now almost undisputed (and inasmuch as many use this relativizing of truth claims as a reason to meet all claims with deconstructing suspicion), it is Polanyi’s argument to personal authentication, in all its complexity, that is the element of “personal” that needs to be articulated and recommended to the reader’s attention.

Nye does, however, do an admirable job of sketching in brief compass the pivotal events that directed Polanyi’s inquiries, and she integrates these events into her remarkably incisive and concise chapter by chapter summary. She remarks more than once on the density and difficulty of Polanyi’s argument(s). Making the arresting claim that “Polanyi was a consummate essayist,” she warns her reader that “the book is not straightforward . . . not ‘one long argument’” (xii). For that reason, she sets out to aid readers by developing lists of key words, which I have reproduced in the appendix. They are meant, I think, to function as thematic motifs offered to help readers track the development of ideas across what she clearly considers to be a collection of essays.

When an author condenses so much background into so few pages, the selection of anchoring elements is always revealing. For example, by focusing on Polanyi’s assessment of the failure of Nikolai Vavilov rather than on the failure of Trofim Lysenko, she takes a deeper cut at specifying what went wrong in the Soviet Union and what Polanyi learned from it. The problem was not simply that Lysenko’s bad science achieved unwarranted authority by conforming to the vision of history promoted by political figures who should not have been arbitrating scientific disputes in the first place (though that was, of course, true); nor could the problem be reduced to the shocking fact that Vavilov could be ‘disappeared’ and his death obscured and misrepresented for years without any significant objections from the scientific community. The still deeper problem that Polanyi recognized was with Vavilov himself. The impetus for Polanyi’s philosophy of science, according to Nye, can be found in Polanyi’s recognition that “Vavilov did not have a philosophy of science that satisfactorily explains “what distinguishes true science from imposters and opponents [of true science]” (xv). Nye may not actually be uncovering anything new here since she traces this insight directly to subsection 5 of chapter 4 of Polanyi’s 1951 book *The Logic of Liberty* and to the essay “Background and Prospect” that he wrote in 1963 to function as a new introduction when *Science, Faith and Society* was republished. Rereading that subsection in *Logic of Liberty* after reading Nye’s account of the importance of Vavilov, one can see more clearly how Polanyi is reasoning, but her strongest evidence is in “Background and Prospect” where Polanyi retrospectively reports that it was while he was attempting to organize opposition among scientists to the persecution of Soviet biologists (or even just acknowledgment among scientists that unjust and dangerous persecution was going on) that he came to the realization that “Vavilov’s last defence against Lysenko’s theories” and, by extension, his own defense of Vavilov were not, at

their foundation, different from the foundation from which the Soviets argued to the subordination of science to political understandings of the public good. He summarizes his realization this way:

It was in facing these events that I became aware of the weakness of the position I was defending. When I read that Vavilov’s last defense against Lysenko’s theories, in 1939, was to evoke the authority of Western scientists, I had to acknowledge that he was appealing to one authority against another: to the authority accepted in the West against the authority accepted in Soviet Russia. The meeting had been called by the editors of the journal *Under the Banner of Marxism*. Their acceptance of Lysenko’s authority was based on their philosophy of science. What philosophy of science had we in the West to pit against this? How was its general acceptance among us to be accounted for? Was this acceptance justified? On what grounds? [9].

Thus, while it is certainly true that Polanyi meant to discredit the Marxists’ position, Nye enables us to see that a deeper and even more powerful motivation was the realization that he himself was standing on air. He therefore set out to put in place a philosophical foundation from which one could build a right understanding of the conditions necessary for the practice of science and also defensibly differentiate science from pseudoscience. From the vantage point of 1963, he located the beginning of this effort in the essays collected in 1946 as *Science, Faith and Society*. Nye seems correct to treat it as a project that continued through the composition of *Personal Knowledge*, which Polanyi describes in his 1957 preface to that work as “primarily an enquiry into the nature and justification of scientific knowledge” (xxvii)<sup>1</sup>

Nye’s further contribution lies in her identification of Vavilov’s failure with the demarcation problem, which, independent of Polanyi’s work, was an important topic of discussion in mid-century debates among philosophers of science (beginning in the 1930s if one reads the logical positivists as a proposed resolution of this problem, but more often dated to the 1960s and 1970s). She thus uses the “demarcation problem” both as a line tethering *Personal Knowledge* to Polanyi’s own intellectual context and as a means of assessing the value of his contribution. It is worth noticing that the demarcation of science from pseudo-science is still considered to be an area where more

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<sup>1</sup> For the single mention of Vavilov in *Personal Knowledge*, see Michael Polanyi, *Personal Knowledge: Towards a Post-Critical Philosophy* (Chicago: University of Chicago Press, 2015), 180-81. The reference is in the chapter “Intellectual Passions,” and Vavilov is treated there simply as a tragic casualty of Stalinist “repudiation . . . of science pursued for its own sake” (180). What follows, though, is a remarkable passage. Polanyi reflects briefly on the fact that even under a Stalinist regime which measures the value of science by its “practical usefulness,” some scientists may continue to pursue science “for its own sake” even while publicly “professing” a theory of science that condemns what they are actually doing as a blameworthy “abuse” (181). Then he laments the spread of the habit of subordinating “cultural values to a radically utilitarian conception of the public good” (180) to countries where scientists “are not compelled to subscribe to it” (181). This leads him to pose the poignant question “whether the distinctive passions which animate the cultivation of science may be superseded one day by other passions, or may even simply fade away for lack of response to them” (181).

work needs to be done.<sup>2</sup> It seems to me, however, that there are actually two demarcation problems under consideration in her introduction: (1) the Vavilov-inspired problem of differentiating reliable scientific claims from political and ideological claims masquerading as science and (2) what we might call the Polanyi problem of distinguishing scientific sorts of belief from other sorts of belief once you resolve the first problem in the way that Polanyi does. Although Nye does not explicitly differentiate the two, by teasing the two apart, I think we can say that she believes that Polanyi succeeds with the first (or at least that he deals with it freshly and cogently) but not with the second.

The problem posed by pseudo science arises on multiple fronts: not just Lysenkoism, but also parapsychology, Freudianism, eugenics, astrology, new accounts of the origins of the solar system—and more recently creationism, UFO-ology, homeopathy, and climate-change denial. Nye observes that Polanyi entered the fray with a “social approach to demarcation” (xxii), which ill comported with the logical and analytical efforts of philosophers (for example, Popper’s deployment of a method of skepticism and a criterion of falsifiability); consequently, the philosophers dismissed it. This “social approach” takes as its criteria the compatibility of claims with the structural convictions of stable community of scientists (across time as captured in the tradition and synchronically in the accepted beliefs and practices shaping current research), authoritative peer assessment (“scientists’ valuations of each other’s work” within a “system” that “is coherent and self-governing, with no central authority” [Nye’s formulation, 245]), and an “evolutionary epistemology” that expects to find “productive tension . . . between tradition and innovation or between stability and change” (xxiii). He was not focused on providing a detailed historical analysis of scientific change, nor was it his intention to generate an abstract logical account. He wanted, rather, to provide (in her words) “a sociologically and psychologically sound philosophy of science that preserved the validity and dependability of the scientific process as long as it operated with freedom and autonomy” (265). This social approach to the problem did provide an uncommon impetus to the development of the sociology of science where, in Nye’s view, it was nothing less than revolutionary (xxiv). In her book, she puts it this way: “In contrast [to Polanyi’s lack of influence among philosophers of science], Polanyi’s name has iconic status among sociologists of science who routinely cite Polanyi’s *Personal Knowledge* for its anti-positivism, formulation of the idea of tacit knowledge, and originality in recognizing and describing science as social practice, rather than as formal method” (224).

I find her argument that Polanyi’s solution to the demarcation problem was social, and I am delighted to find so much evidence gathered here to support the thesis

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<sup>2</sup> For a helpful basic summary of the state of the question and the relevant literature (classic and contemporary), see Sven Ove Hansson, “Science and Pseudo-Science,” *The Stanford [online] Encyclopedia of Philosophy* (Spring 2015 Edition), Edward N. Zalta (ed.), URL = <<http://plato.stanford.edu/archives/spr2015/entries/pseudo-science/>>. This entry was first published in 2008 and underwent substantive revision in 2014. Popper and Kuhn are cited and discussed in some detail; Polanyi is not.

that Polanyi was, at least in part, a very fine social theorist. Nevertheless, any credible discussion of Polanyi’s contribution to the demarcation problem must surely give as much attention to his distinctive form of realism as to his account of the social nature of science. Although Nye acknowledges Polanyi’s realism in both her book and her foreword, she does not give it the weight it deserves, thus finessing one of the reasons that philosophers of science might have been expected to pay more attention to Polanyi than they do.<sup>3</sup> It may well be the case that she considers his realism to have been one of the reasons philosophers dismissed him, but if so, that is something she leaves between the lines. Clearly she herself does not find it convincing.

Her comparative neglect (and possible misunderstanding) of Polanyi’s realism also lies at the root of her worry that Polanyi’s account of what ultimately justifies a scientific theory produces a new demarcation problem in that he leaves us unable to differentiate between “valid scientific beliefs” and “other forms of belief” (xii). She might say that this is just another way of phrasing the problem of differentiating valid science from competing but unscientific public claims, but her interest actually seems to be compound. People have many varieties of beliefs: religious beliefs, political beliefs, economic beliefs, scientific beliefs, beliefs about child-rearing, beliefs about the value of education. Once one installs personal conviction at the heart of science, how can scientific beliefs be said to be any different from other beliefs? She consigns to a footnote the following observation:

A worry among philosophers of science was Polanyi’s elision of the distinction between science and religion or other kinds of thought systems or ideologies. A distinction that is not based on social organization is found in Polanyi’s argument that science fundamentally rests in “verification” by empirical evidence, while other thought systems rest in a more emotional process of “validation” [Nye xx n. 2, referencing *Personal Knowledge* 202].

Polanyi’s point in that passage at the very end of the chapter “Intellectual Passions” could function, I suppose, as a kind of demarcation among sorts of belief, but his actual point is that when we consider the range of human articulate systems as “dwelling places” for the mind, we are dealing with a continuum, not with a differentiation of kinds. What changes along the continuum are the relative weights of the personal coefficient (the individual, idiosyncratic pole; the activity of the interpreter) and the coefficient of commonality (the pole of what is multiply available and thus stands over against any individual interpreters). Polanyi does, in this instance, use the term “emotional” with respect to the former coefficient, but I think we must be very careful

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<sup>3</sup> At the end of the section of the Foreword that deals with the demarcation of science from pseudo-science, she writes, “Among the four [Kuhn, Polanyi, Popper, Toulmin], Polanyi was the only one who took a realist position on the ontology of scientific explanation, comparing his conviction . . . to the worship of God” (xxiv); this is, I think, a very misleading and regrettable representation to Polanyi’s conviction that scientific investigation is driven by a passion for a fuller, more comprehensive grasp of the system(s) in which we exist as emergent, embodied, impassioned, questioning beings. Her attribution to him of a belief in “universal truths” (xxi) is equally misleading and unfortunate. See also her remarks on xviii.

about this. A few pages earlier, he correlates the intensification of the personal coefficient with an increase in the capacity of the object of common interest to affect us “comprehensively.” He means by this not only (1) its power to draw upon our “pre-conceptual capacities” as well as our conceptual capacities but also (2) its power to call forth feats of complex integration in which many levels of subsidiary elements are fused into the multivalent valuation that constitutes an apprehension of meaning. Moreover, since Polanyi makes it clear that he is talking here not about sorting out events within a framework but about ways the frameworks themselves come to be and continue to be accredited, it would be more proper to say that “science ~~fundamentally rests in~~ *is upheld by* ‘verification’ by empirical evidence, while other ~~thought~~ *sense-making systems rest in* *are upheld by* a more emotional process of ‘validation.’”

### 3. Themes that “reverberate” in the present

In “*Personal Knowledge* in Its Past and Present,” the last section of the foreword, Nye identifies the elements of Polanyi’s work that continue to be cited and to influence scholarly inquiry. For the Polanyi Society, this is important not just because the future of the organization hinges on the question of what features of Polanyi’s work will fund enough continuing interest and insight to make the Society sustainable, but because it also enables us to evaluate which elements of his work are now part of the unexceptional consensus (whether by reason of his work or by reason of the work of others), which have been so discredited as to have no apparent current purchase, and which might be further explored in the interest of making a notable contribution to contemporary inquiry. And, of course, in terms of Nye’s foreword itself, the question of the status of *Personal Knowledge* as a classic also rests on the case that she is able to make in this section.

Her past/present contrast is left a little fuzzy. The problem may be that the time frame (the 1950s against the 2010s) is too compacted to allow the drawing of clear boundaries between “then” and “now.” The contrast is also complicated because “reverberation” could mean either the explicit use and traceable influence of Polanyi’s arguments in and on present conversations—or it could mean non-causal commonalities that arise from different historical trajectories but may, nevertheless, create new interest in Polanyi as a possible aid in thinking through unsettled contemporary issues. In her book, Nye introduces the discussion of *Personal Knowledge* with this summary comment:

Like most authors, Polanyi lost control of his texts. Chapter 8 examines in detail the philosophy of *Personal Knowledge*, its limited success with philosophers of science, and its meaning for two very different camps in modern American and British culture with which Polanyi engaged: religious thinkers on the one hand and sociologists on the other hand [257].

Her foreword, though briefer, presents us with seven areas instead of just two. The table below condenses this broader array into a table of contrasts.

	<b>“Personal Knowledge in Its Past”</b>	<b>“Personal Knowledge in . . . the Present”</b>
<b>Religion</b>	Polanyi was invited to give the Gifford Lectures because his work was perceived to be pertinent to natural theology	Polanyi’s work has been taken up by proponents of intelligent design, but this is a <i>false</i> resonance because his work does not posit the kind of casual agency that is central to intelligent design arguments.
<b>Political Concerns</b>	Polanyi was celebrated as much for his mid-century opposition to totalitarianism, especially Soviet Communism, as for his actual contribution to philosophy of science.	<ul style="list-style-type: none"> <li>• The opposition to totalitarianism no longer offers much resonance.’</li> <li>• However, his work continues to be relevant to liberal democracies because of his attention to the “balance between individual freedom and public liberty” (xxi)</li> <li>• His work also remains politically resonant by reason of (what she takes to be) his defense of the notion of universal truths</li> </ul>
<b>Economics</b>	Polanyi, like Hayek, supported free market economics	His work remains resonant with all those in liberal democracies who continue to hold that “individual and freely-acting initiatives must be allowed to prosper and to interact and mutually adjust themselves” (xxi).
<b>Epistemology of science</b>	Polanyi was a philosophical outsider, whose account of scientific knowing was appreciated by scientists but dismissed by philosophers; his solution to the demarcation problem was not satisfying to philosophers of science because it was social rather than philosophical.	<ul style="list-style-type: none"> <li>• Polanyi’s argument for tacit knowledge continues to have purchase</li> <li>• Polanyi’s social account of what justifies scientific belief in a theory is the subject of coming interest</li> </ul>
<b>Biology</b>	His anti-mechanistic evolutionary theory of hierarchy and development was in keeping with the science (especially biophysics) of the 1930s and was of interest to proponents of evolutionary biology.	His evolutionary theory is now regarded as “unsupported and unsound” (xx).
<b>Sociology</b>		Continuing importance in the field of sociology of science and a significant influence in the new field of science studies (xxiv).
<b>Management and Systems Theory</b>		Polanyi’s treatment of political, economic, and scientific life as analogous mutually adjusting systems, together with his accounts

		of emergence and complexity, are notable contributions to current work in management and systems theory.
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Of the areas of “reverberation” that Nye has identified, I will confine my comments to three—biology, religion, and sociology.

### 3.1 Biology

It appears that she believes that Polanyi’s work has nothing to contribute to contemporary biological investigations. In fact, she makes the case that contemporary work in biology functions to discredit any parts of his argument that address evolutionary biology or rest upon his account of evolutionary biology. In her book, she acknowledges the consistency of Polanyi’s evolutionary views with the antimechanistic philosophy of biology of the 1930s and 1940s, and she looks to Needham’s *Origin and Life* as a source for (or at least a pre-figuration of) Polanyi’s argument that organisms cannot be explained fully by examining the lower chemical and physical strata of their being. While it represented an important component of the conversation within biology at the time, the field evolved beyond it, and now, judged against ascendant neo-Darwinism, Polanyi’s version of it sounds, to Nye’s ears, like Lamarke’s discredited theories—though “without the mechanism of the inheritance of acquired characteristics” (279). Nye deploys Marjorie Grene’s judgments to support her assessment of Polanyi’s wrong-headed forays into the life sciences. She quotes Grene’s criticism of Polanyi’s “ontological dogmatism” and “hopelessly anthropocentric evolutionism” (273, quoting Mullins 2009-2010, 45-46), and she records Grene’s 2005 remark that Polanyi “hadn’t a clue about evolutionary theory. He didn’t think that neo-Darwinism could be right at all . . . He just had *no* understanding of evolutionary theory” (273, italics in original; quoting Cohen 2005, 10). If this is so, a question that needs to be addressed is whether discrediting that component of *Personal Knowledge* would have ramifications for our consideration of other components of his argument. Polanyi himself said that “biology can be extended by continuous stages into epistemology and more generally into the justification of my own fundamental commitments” (*Personal Knowledge*, 387). If the notion of emergence, and perhaps even his epistemology, is entangled with a faulty account of evolutionary biology, how defensible is his argument?

Yet perhaps Polanyi’s biological theories have not been altogether discredited by subsequent developments. Phil Mullins, for example, is exploring potential—and to my scientifically uneducated eye convincing—correlations between certain of Polanyi’s arguments and the work of contemporary biosemioticians. He is not alone in this. The February 2017 issue of *Tradition and Discovery* will offer a set of three essays on this subject.

This is not the place nor am I the proper person to work through these issues, but I do take them to be central to any complete assessment of Polanyi’s contribution and hope that better placed scholars will take them on.

### 3.2 Religion

It seems safe to say that Nye regards Polanyi’s engagement with and reception among “religious thinkers” as unfortunate and misguided. I surmise that she has a fairly narrow conception of religion and does not count it in his favor that he was invited to give the Gifford Lectures. In her book she goes so far as to imply that Polanyi himself may have been disingenuous, if not in accepting the invitation itself, at least in his introduction of reflections on deity into the last of the lectures and the last part of the book. She emphasizes Polanyi’s expression of his religious doubts to J. H. Oldham (275) and Grene’s “severe misgivings about the fourth section and especially the last chapter of *Personal Knowledge*” (273). Further, she records this damaging anecdote:

Polanyi’s close friend Elizabeth Sewell, herself a practicing Catholic, said that she was puzzled at his co-optation after his death by Christian thinkers, remembering that Polanyi once remarked on how scientists were liable to write long books and then put God into the last sentence, fully aware that she knew that God is the last word in *Personal Knowledge* [273].

In the foreword, Nye assigns current religious interest in Polanyi’s work to proponents of intelligent design. This interest by religious thinkers in *Personal Knowledge* is, however, dismissed as a false resonance. The supporters of intelligent design understand the pattern and order of the universe to be the intentional outcome of an active, intelligent, pre-existing, external agency. In Nye’s view—and mine—Polanyi supposes no such thing; thus, any continuing interest in Polanyi’s work by “the intelligent design community” (xx) is, at best, a mistake based on a misreading.<sup>4</sup> She grants (but declines to explore) that scholars in religion might give attention to the book simply because it is a revision of his Gifford Lectures, and she acknowledges (but does not examine) the book’s “thought-provoking and contentious analogies between scientific belief and religious faith” (xx).

The book offers a more expansive (but not more insightful) examination of “religious” reception of *Personal Knowledge*. For example, in the book, Nye gives attention to the “congeniality” that the “religious tone” of Polanyi’s work had for many scientists

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<sup>4</sup> In her book, she discusses the reception of the book by proponents of intelligent design somewhat more extensively, noting that the “best known manifestation” of the “religious reaction” to the latter part of *Personal Knowledge* was the “co-optation of Polanyi’s name by the intelligent design community” (277). She records the creation (in 1999) and rapid dismantling of the Michael Polanyi Center for Complexity, Information, and Design at Baylor University. She also notes that “leading scholars in the Polanyi Society” have argued against identifying Polanyi’s cosmology with that of intelligent design; she has in mind Richard Gelwick, John Apczynski, and Walt Gulick.

(260). She observes that “the links between science and religion are old and deep” (275), and with her usual gift for creating rich, concise summaries, she offers a thumbnail sketch of the “religious or spiritual dimension” of the work of numerous scientists (Albert Einstein, of course, but also chemist Charles Coulson, physicist Max Planck, and scientist-philosophers like Pierre Duhem). Still, Nye’s understanding of the religious reception of Polanyi’s work is quite shallow—mainly because she does not seem to have any acquaintance with twentieth-century issues in the philosophy or religion and/or philosophical theology. This also accounts, I think, for her apparent puzzlement as to why Polanyi was invited to give the Gifford Lectures. She resolves this puzzlement by trying to align Polanyi’s work with earlier traditions of natural theology, and in doing so distorts both the insights of the last part of *Personal Knowledge* and her own effort to explain why “religious thinkers” were interested in his work.

Nevertheless, members of the Polanyi Society should take a serious look at what she says in her book about this organization. Her comments are not friendly. At a minimum, they provide a warning that we should consider, but in the worst case, these comments in an important book have the potential to damage the Society’s credibility with some of the audiences where, according to Nye, contemporary interest is most pronounced. Here is what she writes:

The religiously oriented Polanyi Society, founded in 1972, began publishing the journal *Tradition and Discovery* in 1973 with the aim of encouraging scholarship in Polanyian thought and to “open, broaden, and integrate our understanding and thereby to bring us into closer appreciation of, and oneness with, that which is transcendent and, not inappropriately, perceived as ‘holy.’” The Polanyi Society meets annually in conjunction with the American Academy of Religion and the Society for Biblical Literature [274].

What follows is not an informed discussion of Polanyi in relation to the challenges explored in, say, the philosophy of religion, but rather a discussion of personal religious belief. The Polanyi Society comes off as hardly better than the proponents of intelligent design (that she acknowledges that members of the Polanyi Society have argued that Polanyi’s work is not compatible with intelligent design may create more of a sense of linkage than clear differentiation—it implies that such issues are among our central interests). In light of this characterization, we are properly prompted to consider how the Polanyi Society might (1) counter this kind of narrow conception of the relevance of Polanyi’s work to the field of religion, but also, more importantly (2) actively reposition ourselves with respect to other dimensions of Polanyi’s contemporary legacy. We should confront the possibility that the tight association with the AAR (and SBL!) implied by Nye may function to discredit Polanyi with secular scholars in other disciplines.

### 3.3 Sociology

Recall that according to Nye’s narrative, Polanyi, prompted by his realization that Vavilov did not have an adequate philosophy of science in which to ground his defense of his work, set out to produce such a philosophy, a project culminating in *Personal Knowledge*. Because his solution to the primary demarcation problem (differentiating science from pseudoscience) was ultimately social, philosophers, who approached the issue in terms of verification and justification, did not recognize his work as a contribution to their field. As a result they did not (and do not) read it, teach it, or engage it. There were, of course, a small number of philosophers—Stephen Toulmin, for one—who joined Polanyi in arguing against the positivist assumptions that funded the emphasis on verification and justification. However, these figures, with whom Polanyi might have made common cause against “scientific” objectivism, found Polanyi’s notions of commitment and conversion dangerously subjectivist and accused him of treating science as if it were a religious creed. Even philosophers who appreciated his critique of the regnant philosophy of science were unpersuaded and unimpressed by his effort to “demonstrate the roles of ineffable, passionate, and personal factors in an everyday scientific life” (Nye 267). Some found it tender-minded and elusive; others considered it unacceptably antirational. For all these reasons, *Personal Knowledge* was not just ignored; it was pointedly rejected. Thus it cannot by any stretch be described as a classic in philosophy or even a classic in the philosophy of science. Philosophers, and especially philosophers of science, were, in her view his primary (possibly his sole) intended audience.

The social sciences, in contrast, offer a very different landscape of reception. “Polanyi’s ideas,” she writes, “revolutionized the sociology of science and played an important role in the conceptual foundations of the new field of science studies” (xxiv). She identifies Polanyi, Kuhn, and J. D. Bernal as the primary theorists whose work prompted the framing of a new “science studies methodology” that “emphasizes the social and psychological conditions of the *construction* of scientific knowledge rather than the empirical and logical structure of the *discovery* of scientific knowledge” (xxiv, italics in original). This movement included, according to Nye, an interest in “integrat[ing] liberal values and human and social dimensions into studies of the history and methodology of scientific knowledge” (xxiv). She notes, however, that although science studies constructivists “have made use of Polanyi’s notions of tacit and personal knowledge as well as his emphasis on passion, commitment, trust and belief,” they reject both his reliance on scientific elites and his “realist foundation” (xxiv). As I noted above, Nye herself gives short shrift to Polanyi’s realism, remarking that it has a “religious tone” which was perhaps appealing to scientists but not to philosophers (260). The index of her book offers only three pages treating Polanyi’s realism, and her subhead “Realism, Religion, and Design” captures her sense of what *realism* portends; it is possible that she confuses realism and vitalism (see page 273). There is a bit of a paradox here. Although it is clear that Polanyi’s realism is incompatible with a thoroughgoing social constructionism (what we might describe as social construction ‘all the way down’), it is constructionists who (in Nye’s view) bear the most noticeable mark of his influence.

“Whether or not Polanyi’s work outside physical chemistry was amateurish or mediocre, as judged by specialists, there is no question that it was influential, and in no field was it more influential than in the social construction of science” (304). The phrase “the social construction of science” is itself ambiguous. There is a significant difference between saying that the community of scientists and the practices of science are socially constructed and saying that the findings, discoveries, and claims of science are social constructions. Polanyi would agree with the first, but not the second—which is one of the reasons it would have been helpful if she had given more dispassionate attention to what she calls his “realism.”

This brings us back to our earlier question: If she is right that his work has been taken up primarily in the social sciences, particularly in the sociology of science, is it then proper to say that this represents something contrary to his intentions? I am not persuaded. What we see in Polanyi is what we also see in the first third of Mannheim’s *Ideology and Utopia*: the realization that epistemology itself can no long be unfolded in the abstract (or, we might say, within the limits of reason alone), but must give way to or evolve into social epistemology or the sociology of knowledge. There is no value-free knowledge, and it is meaningless to even wish for such a thing. Moreover, the values with which every knowledge claim is freighted are the values of a community with complex roots and porous borders. I am aware that Polanyi and Mannheim had their differences, but Nye herself identifies “shared thought patterns” that she characterizes as “striking” (282). Both “argued against objectivism and the notion of scientific detachment while attempting to save the possibility of valid knowledge that is not subjective,” and both sought to replace “the false ideal of a detached, impersonal point of view” with an accreditation of “an essentially human point of view which is within the limits of a human perspective, constantly striving to enlarge itself” (282). While it is clear that Polanyi was deeply critical of the social determinism and Marxist tenor of much of the sociology of his time, I do not think he was any less intentional or deliberate than Mannheim was in both his criticism of asocial epistemologies and his generation of a distinctively social epistemology.

#### 4. But is it a classic?

While it probably does not matter much whether or not we label *Personal Knowledge* a classic, the question nevertheless prompts reflection about the book taken as a whole. To the extent that Polanyi struck out from the scientific “discipline” of his training to engage whatever compelling problems presented themselves to him, he trespassed with abandon in fields to which he had not been formed, with little knowledge of their traditions or their self-set standards. This may be regarded as amateurism or dilettantism or creativity or an act of “breaking out.” In any case, his work is, as it were, homeless (in the disciplinary sense) by design.

Yet if it is not an enduring, foundational text in any particular scholarly discipline or discourse, can it still qualify as a classic under some other rubric? This seems to be what Nye is attempting to establish in the final paragraph of her foreword. Of course, it is possible that she added this elevating praise out of some simple sense of duty to the University of Chicago Press, which is her own publisher and which by inviting her to write this introduction expressed an implicit trust that she would make an energetic case that *Personal Knowledge* is well worth reading. Yet it is equally possible that she ended up feeling her way toward the definition of a classic that is irreducible to a particular discourse precisely because of its tendency to shift the focus of concern and redraw the customary boundary lines. It is significant that the definition that she provides is through and through moral:

The book has remained a classic that is read because of the multiple ways in which it addresses questions at the heart of how we learn, how we know, and how we live. *Personal Knowledge* reflects an identity of Polanyi as *provocateur* and polemicist. It challenges the reader to debate the tension between the rationalist ideal of value-free knowledge and the humanist ideal of ethically responsible knowledge [xxv].

Thus it seems that perhaps our table of “past” and “present” needs another row and another area of disciplinary interest—that of moral philosophy, inclusive of professional ethics.

Literary critic Charles Augustin Sainte-Beuve also asked, in a widely known essay, “What Is a Classic?” His answer is not so different from Nye’s, though he shifts the emphasis from text to author:

A true classic . . . is an author who has enriched the human mind, increased its treasure, and caused it to advance a step; who has discovered some moral and not equivocal truth, or revealed some eternal passion in that heart where all seemed known and discovered; who has expressed his thought, observation, or invention, in no matter what form, only provided it be broad and great, refined and sensible, sane and beautiful in itself; who has spoken to all in his own peculiar style. . . . Such a classic may for a moment have been revolutionary; it may at least have seemed so, but it is not; it only lashed and subverted whatever prevented the restoration of the balance of order and beauty [3-4].

Whatever the outcome of the assessment might be, I think Polanyi would be gratified to have his work and his authorship evaluated against such criteria.

## Appendix

Acknowledging that the *Personal Knowledge* is, in its density, “not an easy book to read” (xxv), Nye generates lists of “keywords that the reader may find helpful” (xviii; the lists follow on page xix). She creates three lists, which I have given in full. As I understand it (and the text is a bit cryptic), the keywords that she places under the headings of philosophy and politics are, in her judgment, key words that were in widespread use in these arenas of discourse in the mid-twentieth century; thus, their use by Polanyi, or any other philosopher of science or social theorist, was more cultural than innovative. In his philosophy of science, however, Polanyi also introduced keywords (placed in the middle column of the table below) that he either deployed in novel ways and contexts (for example, “belief,” “conversion”) or introduced as innovations (for example, “tacit knowledge”).

Keywords in Philosophical Discourse	Keywords Distinctive to Polanyi’s Philosophy of Science	Keywords in Political Discourse
Discovery	Belief	Authority
Empiricism	Conversion	Communism
Evolution	Tacit knowledge	Community
Framework	Personal knowledge	Freedom
Heuristic	Articulate knowledge	Free society
Indeterminism	Inarticulate knowledge	Liberalism
Justification	Commitment	Materialism
Language	Connoisseurship	Marxism
Logic	Conviviality	Tradition
Mechanism	Fiduciary	Totalitarianism
Objectivity	Framework	Consensus
Positivism	Indwelling	Moral inversion
Reality	Logical gap	Public liberty
Subjectivity	Passion	
Theory	Skill	
Truth	Subsidiary knowledge	
	Focal knowledge	
	Unspecifiability	
	Wholes	
	Particulars	
	Emergence	

## References

Cohen, Benjamin. “Interview of Marjorie Grene with Benjamin Cohen.” *Believer*, March 2005. Accessed December 29, 2009.

[http://www.believermag.com/issues/200503/?read=interview\\_grene](http://www.believermag.com/issues/200503/?read=interview_grene).

Mullins, Phil. “In Memoriam: Marjorie Grene.” *Tradition and Discovery* 36/1 (2009-2010): 55-69.

Mullins, Phil. “Michael Polanyi’s Approach to Biological Systems and Contemporary Biosemiotics.” Unpublished manuscript dated March 13, 2016; forthcoming in *Tradition and Discovery* 43/1 (February 2017): 5-30. The February issues of TAD will also include two additional articles (one by Dániel Bárdos and Gábor Á Zemplén, and one by Walter Gulick, identifying similarities between Polanyi’s work and that of biosemioticians.

Nye, Mary Jo. Foreword. In *Personal Knowledge: Towards a Post-Critical Philosophy*, by Michael Polanyi, xi–xxv. Enlarged edition [the enlargement seems to be solely the addition of Nye’s foreword]. Chicago: University of Chicago Press, 2015.

Nye, Mary Jo. *Michael Polanyi and His Generation: Origins of the Social Construction of Science*. Chicago: University of Chicago Press, 2011.

Polanyi, Michael. *The Logic of Liberty*. London: Routledge and Kegan Paul, 1951. This is the edition Nye cites. The edition I happen to have has different pagination; I have used the edition published by the Liberty Fund in Indianapolis.

Polanyi, Michael. *Personal Knowledge: Towards a Post-Critical Philosophy*. Enlarged edition. Chicago: University of Chicago Press, 2015.

Polanyi, Michael. *Science, Faith and Society*. Republished with a new introduction, “Background and Prospect,” by Michael Polanyi. Chicago: The University of Chicago Press, 1964. Original publication: London: Oxford University Press, 1946.

Sainte-Beuve, Charles Augustin. “What Is a Classic?” In *Essays by Sainte-Beuve*, trans. Elizabeth Lee, 1-12. London: Walter Scott, Ltd., n.d.