



A POLANYIAN APPRAISAL OF OUTCOMES ASSESSMENT: DEFENDING THE ART OF KNOWING AGAINST POSITIVIST PEDAGOGY



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ABSTRACT

While it is sensible to measure that which can be measured, outcomes assessment is completely out of step with Polanyi's understanding of personal knowledge. Current assessment practices represent the revival of positivism in higher education. They ignore the tacit dimension of all knowledge, hinder the development of connoisseurship, and reinforce the power of the administrative class.

The roots of “outcomes assessment,” a plague that has rapidly spread through our system of higher education in the United States, seem to lie in the success of “total quality management” in industrial processes. The paradigm is simple and extremely appealing: define your goals; adopt methods to reach them; measure the outcomes of the process; continue to refine the methods and measure outcomes until the product meets the standards set for it. Incremental improvements based on measurable outcomes is the secret to the success of a multitude of industries, going back to 1798, when Eli Whitney promoted the use of interchangeable parts for muskets. I love technology, and I am an eager consumer of all kinds of things that have been made cheaper, faster, and better by the power of total quality management, but I am opposed, root

and stock, to the thought that higher education can and should be made subject to this paradigm.

Our ongoing industrial and technological revolution prospers from quality controls because the materials and processes used can be measured very precisely. The comparison of products to design specifications is trivial. If a beer can meets the design standards, but does not work, then the specifications need to be rewritten. Costs and benefits can be easily calculated from a statistical analysis of the inputs and outputs of the plant. Once tolerances have been determined, routines can be devised for the production lines that neither require nor allow any creative genius. Adherence to the prescribed operations is all that is needed to produce the desired outcomes.

Students are not interchangeable parts. They are not standardized billets of aluminum that can be expected to respond uniformly to uniform procedures. They differ from one another both by nature and by nurture. What works wonders with one will fail miserably with others. No teacher can control the variables that affect a student's performance in class. We cannot guarantee the quality of students who enter the class; we cannot impose uniform methods of studying the assigned material; we cannot measure all of the educational outcomes for any one student, let alone the unpredictably diverse group that sticks with a course from beginning to end.

From the first time I heard the proposal that we should apply industrial techniques to the educational system, I have been appalled that anyone could seriously imagine that it would be wise and worthwhile to do so. I am thunderstruck by the speed with which this attitude has infected the educational establishment. I do not have any hope that the spread of the contagion will be checked in my lifetime. In my view, the emperor has no clothes, but his nakedness has not robbed him of his power to punish those who say they cannot see the beauty of his raiment. When I asked an administrator why we should comply with the culture of assessment being imposed on us from above, his reply was, "They will hurt us if we don't do what they say." I understood that he, in turn, would hurt me if I did not do what he commanded. I made the mistake of giving him a Nazi salute and saying rather loudly, "Heil, Hitler!" I then learned through personal experience that when dealing with people who are willing and able to inflict pain on underlings, it is not wise to mock them publicly.

From my first year in college, I wanted to be a college professor. I loved the classroom environment and felt changes taking place in me through the dialogue with my teachers. Every semester, without fail, I would feel connections between my courses as I wrote my term papers and prepared for the final exams. Of course, I liked some professors and classes better than others, and I behaved more responsibly in some classes than others. I did not act or react in a predictable fashion to the material presented to me. In the eighteen years of study that I enjoyed from the first college class that I took as a student until the first college class that I taught, I found that seeds planted by my teachers would unexpectedly bear fruit years later. It took me five years to grasp the problems

posed by the similarities and differences in the synoptic gospels; eight or ten years to come to terms with the two stories of creation in Genesis; and about twenty years to finally see the point that a guru had made in a one-day seminar on meditation. I have heard it said that when the student is ready, the teacher appears. In my case, when I was ready, the teachings returned.

When I began to teach in my turn, I expected that my students would, like me, take what they liked from my courses and leave the rest. I hoped that they might also, like me, see good fruit springing up years later from the time we had spent together, but I did not expect to plant seeds one day and harvest apples the next. I asked the students to memorize a lot of information in all of my courses—names, dates, times, places, and definitions that could be tested objectively—but my purpose in doing so was to feed their creative unconscious with the kind of material that can produce insight. This was always an uphill struggle, one that became worse with the development of tools like Google. The internet is a magnificent reservoir of information, and I use it all through the day, but the information that changes our lives is inside us, where we can ruminate on it and make unforeseen connections through insight. Learning by heart is what prepares us to think things through for ourselves. I was content to let students slide through my courses, doing minimum work and earning a minimum grade, if they wished. I designed the grading system to make it easy to get a C but a real achievement to earn an A. As a general rule, if students absorbed 50% of the objective material, they could get a “gentleman’s C” by attending class, participating in discussions, and completing all of the writing assignments.

My goal as a teacher was to provide my students a living model of how to read, write, and reason like a professional theologian. Polanyi says that “All knowledge is tacit or is rooted in tacit knowing” (*M*, 61; *KB*, 195; *SFS*, 10), that “we know more than we can tell,” and that, consequently, our words mean more than we can say (*TD*, 4). What this suggests to me is that I do not possess a perfectly “clear and distinct” account of what I know or how I know it, which, in turn, suggests that I will never be in a position to control what my students learn from me or how they learn it.

To learn by example is to submit to authority. You follow your master because you trust his manner of doing things even when you cannot analyze and account in detail for its effectiveness. By watching the master and emulating his efforts in the presence of his example, the apprentice unconsciously picks up the rules of the art, including those which are not explicitly known to the master himself. These hidden rules can be assimilated only by a person who surrenders himself to that extent uncritically to the imitation of another. A society which wants to preserve a fund of personal knowledge must submit to tradition (*PK*, 53).

Reading, writing, and reasoning are all arts, not sciences. I rely on tacit powers in order to exercise these skills, and I expect my students to do the same: “For just as, owing to the ultimately tacit character of all our knowledge, we remain ever unable to say all that we know, so also, in view of the tacit character of the meaning, we can never quite know what is implied in what we say” (*PK*, 95). This means that I do not know exactly what I am teaching or exactly how the students learn, but I trust that doing the same kinds of things my teachers did for me will be equally educational for my students. As Polanyi says of himself, “*I believe that in spite of the hazards involved, I am called upon to search for the truth and state my findings*” (*PK*, 299; emphasis in original). This is a good motto for professors.

The culture of assessment is based on a very different model of teaching. I believe it is an instance of the “ideal of scientific detachment” that Polanyi saw as a destructive force “in biology, psychology, and sociology...and far beyond the domain of science” (*PK*, vii). The theory of those obsessed with assessment is a form of positivism. As one of my colleagues put it, “For them, if it wasn’t assessed, it didn’t happen.” Total quality management in education means defining exactly what will be taught in advance of beginning the course, shoving that exact content down the throats of every student, then designing methods to determine how closely the material regurgitated by the students matches what was fed to them. The end result is a fraction or series of fractions that express the discrepancy between input and output.

There are, of course, many avocations which require mechanized learning. I do not want to fly with copilots who have mastered only 50% of the instruments in the cockpit or who decided to ignore some of the less interesting laws of aerodynamics or navigation in their studies. For pilots, surgeons, engineers, electricians, and other technicians, I want the pass/fail line set at 95%, and I have no objection to the assessment of instructors on the basis of how many of their students reach that threshold. When it comes to skills that make the difference between life and death, I am dead set against academic freedom. Test such students to within an inch of their lives, early and often. They need to be able to recall how things work under stress, and there is no substitute for stress rehearsals in their training. There are also introductory courses that are necessarily slanted toward memorization of vast quantities of material in mathematics, physics, chemistry, biology, pre-med, and the like, because it is not possible to begin the discussion of the interesting areas of research until the basic vocabulary of the field has been mastered.

What is ideal for those well-defined and very technical fields is the stuff of nightmares and the kiss of death for the humanities. Outcomes assessment demands that every course be reduced to the bare bones of what can be clearly defined and measured. The only thing that matters to the obsessors is what can be quantified in one academic term. There is no room in their worldview for “an understanding which we cannot put into words and which is continuous with the inarticulate faculties of animals” (*PK*, 90).

For Polanyi, education does not eradicate the tacit dimension, but expands it: “Other intellectual skills of a high order are acquired similarly in the course of a continued formal education; and indeed our mute abilities keep growing in the very exercise of our articulate powers” (*PK*, 70). This is true even of technicians, of course. After winning their certificates, they must put what they have learned into practice. There is a huge difference between a newly-graduated pilot and one with thousands of hours of flight experience, a difference that cannot be measured by testing retention of information—both should know the material covered in their instruction manuals—but that is demonstrated by the manner in which they cope with novel and unexpected situations in flight.

The outcomes obsessors focus on only part of the life of the mind at the expense of the whole. They seem to be suffering from physics envy:

The avowed purpose of the exact sciences is to establish complete intellectual control over experience in terms of precise rules which can be formally set out and empirically tested. Could that ideal be fully achieved, all truth and all error could henceforth be ascribed to an exact theory of the universe, while we who accept this theory would be relieved of any occasion for exercising our personal judgment: we should only have to follow the rules faithfully. Classical mechanics approaches this ideal so closely that it is often thought to have achieved it. But this leaves out the element of personal judgment involved in applying the formulae of mechanics to the facts of experience (*PK*, 18-19).

Polanyi advocates the development of personal powers of judgment that cannot be reduced to rules and regulations or measured by objective tests. He insists that “connoisseurship” is essential to “the art of knowing”:

Wherever connoisseurship is found operating within science or technology we may assume that it persists only because it has not been possible to replace it by measurable grading. For a measurement has the advantage of greater objectivity, as shown by the fact that measurements give consistent results in the hands of different observers all over the world, while such objectivity is rarely achieved in the case of physiognomic appreciations. The large amount of time spent by students of chemistry, biology and medicine in their practical courses shows how greatly these sciences rely on the transmission of skills and connoisseurship from master to apprentice. It offers an impressive demonstration of the extent to which the art of knowing has remained unspicifiable at the very heart of science (*PK*, 55).

If knowing is an art (*PK*, 55, 64, 71, 88, 153) then we need artistry in teaching, not the pedagogy of the pedants. “An art which cannot be specified in detail cannot be transmitted by prescription, since no prescription for it exists. It can be passed on only by example from master to apprentice” (*PK*, 53).

In designing courses, I always did think ahead about what materials to use to spur learning in my classes. I looked for examples of problems, some solved and some as yet unresolved, that would demonstrate the nature of theological reflection. I was deliberately acting as a connoisseur of the Catholic theological tradition. “While the athlete or the dancer putting forward their best, act as critics of their own performances, connoisseurs are acknowledged as critics of the goodness of specimens. All personal knowing appraises what it knows by a standard set to itself” (*PK*, 63). I am satisfied that other professors in other disciplines act in the very same way in order to show their students how to think like scientist or a psychologist or a historian.

Although the expert diagnostician, taxonomist and cotton-classer can indicate their clues and formulate their maxims, they know many more things than they can tell, knowing them only in practice, as instrumental particulars, and not explicitly, as objects. The knowledge of such particulars is therefore ineffable, and the pondering of a judgment in terms of such particulars is an ineffable process of thought. This applies equally to connoisseurship as the art of knowing and to skills as the art of doing, wherefore both can be taught only by aid of practical example and never solely by precept (*PK*, 88).

For me, if a syllabus is approved by a professor’s peers, then the odds are excellent that the tradition of that discipline will be transmitted to the next generation.

I have nothing but hostile opinions to offer as a theory of why the most miserable form of pedantry has become the dominant paradigm for higher education over these last thirty years or so. I have heard it said that part of the drive comes from business executives on our boards who have seen good results in industry from total quality management. Some of my colleagues attribute it to the “No Child Left Behind” legislation, which attached punishments and rewards to measurable outcomes in public schools. My own guess is that the total quality model appeals to administrators at all levels because it promises them control over the classroom without requiring them to be connoisseurs themselves. When the outcome of teaching can be reduced to the fraction of output divided by input, any moron can look at the numbers and say, “You can do better than that.” The measure is all that matters. This gives administrators the opportunity to fire poorly-performing professors without looking at anything other than the telltale number.

The reduction of teaching to a number also empowers the accrediting agencies. By imposing this system on all of the member institutions, the agencies have found a way to exercise real control over university life. They can now demonstrate that they have made a difference in the curricula of our universities. The fact that universities came into existence, flourished, and produced western civilization as we know it without the benefit of any accrediting agencies means nothing. “If it wasn’t assessed, it didn’t happen.”

This is essentially a religion. The assessors are not assessed. No administrator has to meet the standards that the administration imposes on teachers unilaterally. They give lip-service to the culture of assessment, but do not endure the hardship themselves. They clothe themselves in the white robes of empiricism and grasp the scepter of positivism. They demand proof from their subjects without providing any proof that their requirements are reasonable. Of course, measuring what can be measured is good advice, but reducing the field of higher education to the measurable is insane.

Though I dissent from this ideal in its absolute form, since I hold that the elimination of personal knowledge from science would destroy science, I acknowledge the decisive achievements of empiricism in opening the way to modern science. Nor do I deny, of course, that science is constantly in danger from the incursion of empty speculations, which must be watchfully resisted and cast out; but I hold that the part played by personal knowledge in science makes it impossible to formulate any precise rule by which such speculations can be distinguished from properly conducted empirical investigations. Empiricism is valid only as a maxim, the application of which itself forms a part of the art of knowing (*PK*, 153).

To me, the spread of the cult of assessment is an example of a moral inversion in which “moral passions...decked out as scientific statements” lead to a “fanatical cult of power” (*PK*, 231). The government has placed accrediting agencies in charge of the universities; the accreditors have imposed one model of pedagogy on all schools; the administrators of the universities have placed themselves in charge of the curriculum. As the meme says, “All your base are belong to us.” “Modern scientism fetters thought as cruelly as ever the churches had done” (*PK*, 265).

By contrast with “the objectivist urge to depersonalize our intelligent mental processes” (*PK*, 257), Polanyi affirms the central role of personal judgment: “Our theory of knowledge is now seen to imply an ontology of the mind. Objectivism requires a specifiably functioning mindless knower. To accept the indeterminacy of knowledge requires, on the contrary, that we accredit a person entitled to shape his knowing according to his own judgment, unspecifiably” (*PK*, 264). I much prefer the ancient

system of trusting professors accredited by the judgment of professors to teach responsibly. The presumption of innocence, good will, and competence has been replaced by a Napoleonic premise that professors must prove, in every course and in every term, that they have taught something definite to someone.

Objectivism has totally falsified our conception of truth, by exalting what we can know and prove, while covering up with ambiguous utterances all that we know and cannot prove, even though the latter knowledge underlies, and must ultimately set its seal to, all that we can prove. In trying to restrict our minds to the few things that are demonstrable, and therefore explicitly dubitable, it has overlooked the a-critical choices which determine the whole being of our minds and has rendered us incapable of acknowledging these vital choices (*PK*, 286).

For the obsessors, only that which can be shoved into students and extracted again is of any importance. Nothing else matters to them: “The ideal of strictly objective knowledge, paradigmatically formulated by Laplace, continues to sustain a universal tendency to enhance the observational accuracy and systematic precision of science, at the expense of its bearing on its subject matter” (*PK*, 149). This mentality leads to the construction of the kinds of courses that students justifiably hate: “A result obtained by applying strict rules mechanically, without committing anyone personally, can mean nothing to anybody” (*PK*, 311).

I do not have any hope of stemming the tide of misguided objectivism in our culture or in the accrediting agencies. I do not think the obsessors will pay the slightest bit of attention to objections raised by a tiny voice in the great crowd of their subjects. The emperor has no clothes, but he is persuaded that he is clothed in glory, and that is all that matters.

REFERENCE

Polanyi, Michael. 1962. *Personal Knowledge*. Chicago: University of Chicago Press..