

1 The Great Instauration: Restoring Professional and Technical Writing to the Humanities

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“I hold every man a debtor to his profession; from which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and an ornament thereunto. This is performed in some degree by the honest and liberal practice of a profession . . . ; but much more is performed if a man be able to visit and strengthen the roots and foundation of the science itself.”(546)
– Sir Francis Bacon, “Preface,” *Maxims of the Law* (1596)

Perhaps Giambattista Vico was only half right when he proposed his cyclical theory of history. Besides returning to the same key ideas, civilizations tend to suffer from the same nagging headaches.¹ This is equally true, on a smaller scale, of academic disciplines. They are defined less by their innovations than by their recurring problems and dilemmas.

This paradox certainly applies to professional and technical writing. At the dawn of the new millennium, our discipline faces the same vexing questions it confronted fifty years ago: Are we primarily practitioners and consultants or scholars and teachers? Do we train or educate students? Should we situate our practice in the classroom or the workplace? Is our subject closer to rhetoric and communications or the natural and social sciences?

These questions have become more urgent on college campuses, as professional and technical writing undergoes another turn on Vico’s spiral of history. The traditional liberal arts paradigm of higher education is being displaced by a new emphasis on professional and technical training, and emerging PTW programs—especially at small liberal arts colleges—find themselves caught in the middle of the culture wars, simultaneously welcomed and resented, courted and resisted. During this time of risk and opportunity, of breakdown and breakthrough, what is our role and where is our place?

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The answer may lie in a Vicoan *ricorso*, a circling back to something old to create something new—a turn-around that is also a turn-about. In the case of professional and technical writing, this means again proposing that our practice is essential to the humanities. However, I am not simply repeating Carolyn Miller’s ideas, already twenty years old, for a more humanistic professional and technical writing practice, much less updating Frank Aydelotte’s humanities-centered engineering curricula from the early twentieth century. Instead, taking a cue from Beth Tebeaux’s scholarship, I want to suggest returning to the *instructional roots* of our discipline by re-examining the educational ideas of one of its founders, Sir Francis Bacon (1561-1626).

As a scholar and a rhetorician, Francis Bacon straddled three worlds: the literary and philosophical, the administrative and professional, and the scientific and technical—the same mixed audience facing any proponent of professional/technical writing in today’s academy. But Bacon is our contemporary in more important ways. Unlike most Renaissance humanists, he located the New Learning (what we now call the humanities) within the related contexts of scientific discovery and invention and professional training and development. Consequently, his proposed educational reforms challenged both the Scholastics, who adhered to the cloistered ideal of the medieval university, and the Ciceronians, who slavishly imitated models of classical rhetoric for imaginary audiences in make-believe situations.

In contrast, Bacon—a believer in public service and the *via activa*—wanted to draw knowledge from and apply knowledge to the natural and social world; and his great treatise, *The Advancement of Learning* (1605), later revised and expanded as *De Augmentis Scientiarum* (1623), is a gigantic curricular blueprint to achieve that end. True education, Bacon argues, should:

- Enhance the professions to make them more ethical, more historically conscious, and more civic-minded.
- Emphasize the material and political conditions of knowledge for the sake of concrete, pragmatic application in the real world.
- Stress the rhetorical underpinnings of organizational and disciplinary discourse, both oral and written.
- Study the media and technologies of science and communications to better government, to reform public and private institutions, and to improve quality of life.

Bacon called his project the Great Instauration, the restoration of true knowledge after centuries of obscurity and neglect, and it went beyond his educational treatises to include his scientific, philosophical and literary works.

Updated and revised, Bacon's proposal can be a useful model for creating and defending professional and technical writing programs within the humanities.

To show how, let me gather some of Bacon's educational ideas from his various writings and apply them to the five stages of undergraduate program development: *planning, implementation, mission, design and development, staffing and administration*. Following Bacon's example, I will use aphorisms, since such maxims, he said, force a writer to distill abstract information into concrete principles and to resist the kind of systematic, a priori thinking that shuts down inquiry before one examines the facts.

APHORISMS FOR BUILDING PTW PROGRAMS IN THE HUMANITIES AND SCIENCES

Planning

“He that builds a fair house upon an ill seat, committeth himself to prison.”(193)

Sir Francis Bacon, “Of Building” from *The Essays* (1625)

- *To minimize the possibility of failure, construct your program on a solid foundation of research.* Just because you build it, doesn't mean they will come, pace Kevin Costner. Before you draft a blueprint, do some basic marketing. If you already offer one or two basic PTW courses, study their enrollment patterns going back five years minimum and note how these classes fulfill the requirements of outside majors. If you start from scratch, interview departments in the natural and social sciences and the professional schools, determine their academic and professional writing needs and curricular restrictions, and design fitting and responsive courses. These steps will prevent your field of dreams from becoming a bog of screams.

“There are in nature certain fountains of justice, whence all civil laws are derived but as streams; and like as waters do take tinctures and tastes from the soils through which they run, so do civil laws vary according to the regions and governments where they are planted, though they proceed from the same fountain.” (287)

Sir Francis Bacon, Book Two, *The Advancement of Learning* (1605)

- *Study the PTW programs of comparable schools, map and analyze patterns of staging and sequencing, then adapt and apply them to your own program.* Use induction to discover the fundamental principles underlying most PTW curricula. Generally, most have *five* stages, each with specific developmental goals and their corresponding courses. For illustration, the following table feature courses from the proposed PTW concentration within Ithaca College's general BA in Writing:

STAGE	GOAL	COURSES
1. Initiation	Use first-year college writing to prepare for professional writing.	WRTG-16300 Writing Seminar: Business WRTG-16400 Writing Seminar: Science
2. Orientation	Teach the building blocks of professional and technical writing at the sophomore level.	WRTG-21100 Writing for the Workplace WRTG-21300 Technical Writing
3. Application	Develop and fine-tune skills through practice and specialization at the lower junior level.	WRTG-31100 Writing for the Professions WRTG-31300 Advanced Technical Writing WRTG-31400 Science Writing WRTG-31700 Proposals, Grants, and Reports
4. Reflection	Frame discipline and practice through history, theory, and rhetoric in upper junior- and senior-level seminars.	WRTG-3600 Composition Theory WRTG-41500 Senior Seminar (PTW)

5. Action	Consult for or intern at an actual company.	WRTG-45000 Internship
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Significantly, these stages correspond to Bacon's four divisions of logic and rhetoric in *The Advancement of Learning*: (1) inquiry and invention, (2) judgment, (3) memory, (4) delivery.

“Studies serve for delight, for ornament, and for ability. Their chief use for delight, is in privateness and retiring; for ornament is in discourses; and for ability, is in the judgment and disposition of business.” (209)

Sir Francis Bacon, “Of Studies” from *The Essays* (1625)

- ***Be comprehensive.*** A hearty education, Bacon believed, should feed the three faculties of the human mind: *reason*, which sees patterns in the world, analyzes data, and posits general principles; *memory*, the mental storehouse of experienced events and material facts; and *imagination*, which channels and articulates the passions and makes intuitive leaps. Even professional and technical training, therefore, should include philosophy, history, and literature.

Implementation

“The ripeness or unripeness of the occasion . . . must ever be well weighed: and generally it is good to commit the beginnings of all great actions to Argus with his hundred eyes, and the ends to Briareus with his hundred hands, first to watch, then to speed.” (125)

Sir Francis Bacon, “Of Delays” from *The Essays* (1625)

- ***Although curricular planning should be slow and painstaking, implementation should be relatively swift.*** Once you have proposed your program, you are obliged to deliver it. First, create a beachhead to cover your service component, to stake out future development, and to raise expectations. Begin with the nucleus of your projected curriculum, the core courses serving both your majors and outside students, then phase in more specialized classes. Ideally, curricular sequencing should unfold like a paper flower in water.

“As the births of living creatures at first are ill-shapen, so are all innovations, which are the births of time.” (132)

Sir Francis Bacon, “Of Innovations” from *The Essays* (1625)

- *Don't worry, however, if your program assumes a different shape and direction than your original proposal.* Provided these changes are responses to student and institutional need, they indicate evolution not devolution. Being audience-centered and market-oriented, PTW curricula should be flexible and adaptive.

Program Mission

“Expert men can execute, and perhaps judge of particulars, one by one; but the general counsels, and the plots and marshalling of affairs come best from those that are learned.” (209)

Sir Francis Bacon, “Of Studies” from *The Essays* (1625)

If your program is housed in the Humanities and Sciences, it should reflect liberal arts values. Unlike PTW programs at polytechnics or research universities, those at small liberal arts colleges should be dedicated less to technical specialization than to what Chase CEO Willard Butcher calls “applied humanities,” using the liberal arts to frame and to inform students’ future careers (426). A broad base of disciplines and a commitment to civics, Peter Drucker insists, are the best foundation for young “knowledge workers” (5).

“They who have hitherto written upon laws were either philosophers or lawyers. The philosophers advance many things that appear beautiful in discourse but lie out of the road of use, whilst the lawyers, being bound and subject to the decrees of the laws prevailing in their several countries, whether Roman or pontifical, have not their judgment free, but write in fetters. But this task properly belongs to statesmen, who best understand civil society, the good of the people, natural equity, the custom of the nations, and the different forms of states; whence they are able to judge laws by principles and precepts as well as natural justice and politics.” (282)

Sir Francis Bacon, Book 8, Ch. 3, *De Augumentis* (1623)

- *Always think socially and institutionally, not only in running your program but in teaching your students.* Professional and technical writing occurs within a nexus of competing discourse communities (business, education, government, and non-profits), and program philosophy, class pedagogy, and curricular design should all reflect that reality. This can be as simple as integrating community service learning into first-year academic writing or as complicated as teaching the classical ideal of the citizen-orator to juniors and seniors.
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“Exercises are to be framed to the life; that is to say, to work ability in that kind whereof man in the course of action should have the most use.” (118)

Sir Francis Bacon, “A Letter and Discourse to Sir Henry Savile” (1604)

- *Whatever its ideals, your program must provide students with marketable, transferable skills.* Without this “real world” application, your curriculum will be useless.

Curricular Design and Development

“The marshalling and sequel of sciences and practices: Logic and Rhetoric should be used and to be read after Poesy, History, and Philosophy. First exercise to do things well and clean; after promptly and readily.” (119)

Sir Francis Bacon, “A Letter and Discourse to Sir Henry Savile” (1604)

- *Provide your students with a clear curricular framework and a coherent disciplinary narrative from the very beginning.* Such context will prevent lower-level courses from becoming too generic and upper-level courses from becoming too specialized.
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“Reading maketh a full man; conference a ready man; and writing an exact man” (209)

Sir Francis Bacon, “Of Studies” from *The Essays* (1625)

- *Students should progress from research and analysis, to dialogue and debate, to execution and evaluation.* This curricular staging ultimately ben-

efits all PTW students, whether they choose to become scholars or consultants in the field.

“The mechanical arts, having in them some breath of life, are continually growing and becoming more perfect. As originally invented, they are commonly rude, clumsy, and shapeless; afterwards, they acquire new powers and more commodious arrangements and constructions . . . [till] they arrive at the ultimate perfection of which they are capable. Philosophy and the intellectuals sciences, on the contrary, stand like statues, worshiped and celebrated, but not moved or advanced.” (8-9)

Sir Francis Bacon, *The Great Instauration* (1620)

- ***Stress tools, not rules.*** Since professional and technical writing is practice-driven and context-specific, shun all abstractions. Technology, document design, media dynamics, and institutional constraints should determine your program’s curricular philosophy, not the other way around. “Pass from Vulcan to Minerva,” Bacon advised (141). Move from praxis to theory. *Never* place theory before praxis. That, Bacon would say, is like building a mansion from the roof down.

“Of the choice (because you mean the study of humanity), I think history the most, and I had almost said of only use.” (105)

Sir Francis Bacon, “Advice to Fulke Greville” (1596)

- ***Historicize your subject.*** That means more than teaching about the development of professional and technical writing. It means tracing the discipline’s roots back to classical rhetoric, studying the growth of various social institutions, and reviewing the evolution of different media and technologies. History provides your students with a formative narrative and connects your program to the humanities.

“Histories make men wise, poets witty, the mathematics subtle, natural philosophy deep, moral [ethics] grave, logic and rhetoric able to content.” (210)

Sir Francis Bacon, “Of Studies” from *The Essays* (1625)

- **Use case studies to train your students.** Just as young lawyers study past cases to learn legal precedent and to master the conventions and of the courtroom, young PTW practitioners should study past dossiers to learn documentation and to master the demands of the workplace. Case studies are the ideal forum for argumentation and ethical speculation, where students can practice institutional and technological advocacy before multiple audiences.
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“There is in human nature generally more of the fool than of the wise; and therefore those faculties by which the foolish part of men’s minds is taken are most potent.” (94)

Sir Francis Bacon, “Of Boldness” from *The Essays* (1625)

- **Be honest about the politics and absurdity of institutional writing.** Most textbooks skirt this issue by presenting straightforward models and forms and ideal collaborative situations. Your program must address the reversals, rivalries, and irrational thinking that characterize most writing projects and suggest effective countermeasures. At the very least, coping strategies. If you send lambs to the corporate sheering floor, you are guilty of fleecing yourself.
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“For it is a rule in the doctrine of delivery, that every science which comports not with anticipations and prejudices must seek the assistance of similes and allusions.” (175)

Sir Francis Bacon, Book 6, Ch. 2, *De Augmentis* (1623)

- **Stress the finer points of style and persuasion.** Arrangement, formatting, even striking visuals are not enough to create a winning presentation. Sometimes the telling phrase, the striking metaphor, the provocative analogy carry the day.
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“It is a trivial grammar-school text, but yet worthy a wise man’s consideration. Question was asked of Demosthenes. *What was the chief part of an orator?* He answered, *Action*. [*Delivery.*] What next? *Action*. What next again? *Action*.” (94)

Sir Francis Bacon, “Of Boldness” from *The Essays* (1625)

- *Aim for results.* “Rhetoric,” Bacon claimed, “applies Reason to the Imagination to better move the Will” (238). An effective PTW curriculum will value real-life effectiveness over textbook correctness, which is why you must include credit-bearing internships and consultancies. Seek program feedback, therefore, from potential employers in industry and technology, as well as college administrators, promoters, and admissions officers. And whether or not Bacon actually wrote Shakespeare’s plays, make this line from Act 3, Scene 2 of *Coriolanus* your motto: “*In such business action is eloquence.*” (79).

Staffing and Administration

“They that have the best eyes are not always the best lapidaries [jewelers]; and according to the proverb the greatest clerks are not always the wisest men.” (105)

Sir Francis Bacon, “Advice to Fulke Greville” (1596)

- *Staff courses according to experience and expertise, not seniority and advanced degrees.* This concept seems heretical but makes the best sense and does the most justice to both students and subjects. A full- or part-time instructor who worked for five years as a technical and promotional writer in a county hospital is better qualified to teach medical writing than an assistant or associate professor who graduated from RPI. Scholars can supply practitioners with outside readings, but practitioners cannot supply scholars with inside knowledge.

“Surely ever medicine is an innovation, and he that will not apply new remedies must expect new evils. For time is the greatest innovator, and if time of course alter things to the worse, and wisdom and counsel not alter them to the better, what shall be the end?” (132)

Sir Francis Bacon, “Of Innovations” from *The Essays* (1625)

- *Anticipate change and plan for contingencies.* To keep your program open and flexible, be prepared to alter its focus and sequencing and to amend, combine, or jettison courses in response to market need and student demand. On the subject of adaptability, Bacon loved to quote Machiavelli: “If you can change your nature with times and circumstances, your fortune will not change” (68).

“The proceeding upon somewhat conceived in writing doth for the most part facilitate dispatch; for though it should be wholly rejected, yet that negative is more pregnant of direction than an indefinite, as ashes are more generative than dust.” (135)

Sir Francis Bacon, “Of Dispatch” from *The Essays* (1625)

- ***Compost your failures to fertilize future projects.*** Recycle rejected courses as special seminars. Transplant background material from an aborted proposal into a program report. Boilerplate unread course descriptions when submitting a catalog copy. Waste nothing.
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“Just as some putrid substances like musk or civet yield the best scent, so base and sordid details sometimes provide excellent light and information.” (122)

Sir Francis Bacon, Book One, Aphorism 120, *The New Organon* (1620)

- ***Even when things stink, welcome confusion and disappointment.*** If you can bear the temporary din of frustration, your program’s elements eventually will harmonize. In science as in music, Bacon said, dissonance is necessary to fine-tune an instrument.

A Baconian approach to curricular design and implementation offers three distinct advantages to emerging PTW programs at small liberal arts colleges. First, Bacon’s educational principles and practices make a convincing apologia for most English departments and writing programs. The Lord Chancellor is the best lawyer to plead your case because he appeals to so many different audiences. Traditional humanists will be pleased to see how Bacon’s ideas about professional and technical writing fit historically within their own disciplines. Theorists and New Historians will respect his materialism and praxis, while department chairs and program directors will appreciate his shrewdness and practicality.

Second, Bacon’s pragmatism and social conscience wed humanistic education to public policy and public works. As both a legislator and a jurist, James Spedding observes, Bacon “could imagine like a poet and execute like a clerk of works,” qualities that will appeal beyond a department’s curriculum committee and will engage college administrators and representatives from research and industry (72). Bacon was committed to achieving concrete results in the real world. His *summum bonum* was the social good. Indeed, as J. G. Crowther ex-

plains, Bacon believed “the most determined statesmen are those who are deeply versed in social philosophy, and are engaged in carrying out policies based on a profound study of the principles of nature and society” (44). Small, liberal arts colleges should adapt this philosophy in their humanities-based PTW programs, using professional and technical training to bridge the gap between the quad and the commons.

Last, Bacon’s radical rethinking of the sciences and the professions can inspire programs to re-imagine their pedagogy while providing the necessary theoretical scaffolding to paint the big picture. The loam of historical research can provide rich soil to grow good programs. Bacon, an avid gardener and landscaper, makes this analogy in Book 6, Chapter 2 of *De Augmentis Scientiarum*:

For it is in arts as in trees—if a tree were to be used, no matter for the root, but if it were to be transplanted, it is a surer way to take the root than the slips. So the transplantation now practiced of the sciences makes a great show, as it were, of branches, that without the roots may indeed be fit for the builder, but not for the planter. He who would promote the growth of the sciences should be less solicitous about the trunk or body of them and lend his care to preserve the roots, and draw them out with some little earth about them. (172)

However, we scholars and teachers of PTW should look back less to legitimize our practice for the sake of our critics than to look around and look ahead for the sake of our students. Bacon was no antiquarian, after all. Although he venerated history, he believed people should use the past primarily to secure present provisions for a future journey. The frontispiece of the 1620 edition of *The Great Instauration* shows a billowing galleon returning through the Pillars of Hercules from its voyage on unknown seas. If the latest turn in the academy has made our discipline more valuable and necessary, if it is now our turn to define the rules of the game, if this collective return to our intellectual past is to be more than academic, then we must recapture our sense of wonder with our sense of mission. In T. S. Eliot’s words:

We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know the place for the first time. (59)

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