

Numbers, Please!

John R. Thelin

Publishing deadlines can be a nuisance for an author. For example, in 1972 when the editor of *Rolling Stone* magazine pressed Truman Capote on why he had promptly cashed his advance payment check yet had failed to submit his manuscript more than a month after the publishing deadline, Capote replied, “Do you want an article that is timely or timeless?” Much to Capote’s chagrin, the editor replied, “Both!” Capote’s response was “Neither”—and the project fell apart. Little wonder, then, that I was pleasantly surprised to receive the invitation from the *History of Education Quarterly* to explain to colleagues what topic I would choose if I were to have the luxury of writing forever. After the exhilaration of being both timely and timeless wore off, I realized the invitation was problematic.

Forever? Even John D. Rockefeller found that daunting, as he commented on his reservations about creating perpetual endowment funds: “Forever is a long time . . .” Before settling on a topic, I resolved that I wanted the ultimate combination of unlimited time plus unlimited money. If I am going to be writing on a topic forever, I want an assurance of ample, enduring support. Whether it be NSF or NIH or the Spencer Foundation is negotiable. Once having settled the question of perpetual funding, I gained inspiration for this venture from Leslie Stephens of Cambridge University, who wrote in 1865, “But if you wish at once to do nothing and be respectable nowadays, the best pretext is to be at work on some profound study . . .”¹

Given these assurances, I opt to write about the history of higher education in a way that relies on quantitative data. “Numbers, please!” is my research request in taking on a longitudinal study of colleges and universities over time. Budgets, enrollments, degree completions, state appropriations, private donations, foundation bequests . . . all. I want them all. And here is the catch—I want them compiled over several centuries. IPEDS, the federal database sponsored by the National

John R. Thelin is a professor in the Educational Policy Studies & Evaluation Department at University of Kentucky, 131 Taylor Education Bldg., Lexington, KY.

¹Leslie Stephen, *Sketches from Cambridge by a Don* (Cambridge: Macmillan and Co., 1865), quoted in John Fowles, *The French Lieutenant’s Woman* (Boston: Little, Brown & Company, 1969), 44.

Center for Education Statistics whose official name is “Integrated Post-secondary Education Data Systems,” only extends back thirty years as the successor to HEGIS (Higher Education General Information Systems) that was started around 1967. I would insist on going back at least to 1630. My aim is to write using statistics with a difference. Instead of emphasizing the heroic and sophisticated techniques of contemporary statistical analysis, I want to subject the statistical data to the lens of historical context.

The historian whose work has most influenced my thinking on the project is the late Carlo M. Cipolla, author of *Literacy and Development in the West*.² Cipolla had the right idea about the scholarly life. A native of Italy, he held a joint appointment at the University of Pavia for six months of the year, with the remaining six months as a tenured professor at the University of California, Berkeley. And, to parse it with more precision and attractiveness, at Berkeley he had a joint appointment in the departments of history and economics.³ As an academic model, he had literally the best of all worlds! What I found so compelling about this quiet, mild mannered, dapper scholar was his ease and sense of humor about statistics. On the one hand, he traveled to archives and sites far and wide to gather original statistics from which to posit remarkable estimates of literacy over time and across nations. On the other hand, he always was playfully aware of the limits of historical data collection. He held no false hope that records were thorough or even accurate. Hence, he continually and good naturedly reminded readers to be aware of the context of data. Most humorous to him were his fellow economists who would say, “If one holds weather constant as a variable, then crop production should be . . .” His rebuttal was that weather cannot be held constant. Despite the hubris of twentieth century economists, weather was uncontrollable and also probably had more influence on world history than politicians and even economists.

Cipolla was insightful on statistics and, at times, gently provided observations that were counterintuitive. For example, some historians of education might have presumed that the best source of statistical data on literacy would come from schools and their record keeping. Cipolla disagreed on several counts. First, the idea and structure of formal schools, especially widespread or compulsory schooling, was relatively recent and limited. It missed most of the population. This was true even

²Carlo M. Cipolla, *Literacy and Development in the West* (Harmondsworth, Middlesex, UK: Penguin Books, 1969), 144.

³Carlo M. Cipolla, “Fortuna Plus Homini Qam Consilium Valet,” in *The Historian’s Workshop: Original Essays by Sixteen Historians*, ed. L. P. Curtis, Jr. (New York: Alfred A. Knopf, 1970), 65–76.

in nations with compulsory education. School records might at best provide a good estimate of literacy and scholastic achievement among young adults between the ages of 12 and 18. But this told little about literacy for the entire age span of a nation at any given time. Reliance on school records also begged the question of how is it that in some eras and regions, people acquired a relatively high degree of literacy even though there were few if any schools. Better to look at adult records in places such as churches where men and women were asked to sign such important documents signifying their participation in weddings, births, baptisms, and funerals. For men in a nation, Cipolla found that military induction provided a fertile, valid rite of passage. When one was drafted, conscripted, or enlisted in his nation's army, typically one had to sign agreements and probably also go through a battery of placement examinations, revealing the ability to read and the ability to write. So far, so good! The problem was that of national differences. Switzerland kept copious records, whereas neighboring Italy was perfunctory.

Apart from schools, churches, and the military, Cipolla relied heavily on court houses, jails, and prisons to gather data. Indicative of his wisdom and humor was his conclusion that if one wanted to have a learned conversation or a written exchange with a convicted felon in the late eighteenth century, Dublin was far more attractive than London. Evidently Ireland had better educated criminals than did England. But historical change in definitions of literacy altered the statistics—and the social landscape. Whereas in the fourteenth century, literacy was presumed to be the exclusive province of the church, by the sixteenth century, this could no longer be assumed. It had real world ramifications. Someone convicted of a capital crime could escape the gallows or henchman in 1,400 by invoking “benefit of the clergy”—a claim that was verified by the ability to sign one's name. Two centuries later, the exemption persisted—but London low life was very secular and included a large number who could sign their name, yet who had no substantive connection with the clergy. In sum, gains in popular literacy (a good thing) carried some dysfunctions.

Shortly after I read Carlo Cipolla's works in 1969, I was the beneficiary of a windfall, thanks to the editors of the *History of Education Quarterly*. If you want evidence of the significance and impact of the journal and its members, consider as “Exhibit A” the winter 1971 issue devoted to the theme of “the liberal arts college in the age of the university.” Among the four stellar articles, I was especially intrigued by the imaginative, effective use of statistics by historian James Axtell in his piece, “The Death of the Liberal Arts College.” Axtell effectively probed and pierced the inflated claims of “university builders” in the late nineteenth century who unabashedly claimed that “their” modern universities had eclipsed and usurped the allegedly small, moribund, anti-intellectual

private liberal arts colleges. Axtell presented matter-of-factly such findings that the enrollment of an Amherst College surpassed that of many midwestern state universities of 1890. The established New England colleges often had libraries far larger in holdings than did the “great state universities” of the era. The residual message and strategy I carried away from this seminal work was that statistics, especially historical statistics, provided the arrows in the historian’s quiver to look thoughtfully and systematically at the claims of university administrators and boards of trustees, whether in 1810, 1910, or 2010.⁴

My own forays: attrition and retention; state budgets. I am fascinated by the ritualized pronouncements of state university presidents. For example, starting in 1978, I began tracking the scattered, then pervasive, groundswell of speeches in which the president of a state flagship university would tell a group of prospective donors, “We used to be state supported. Then we were state assisted. Now we are state located . . .” All this was a use and abuse of history to make the present-minded case that state universities were neglected orphans, victims of unfair and uncaring state legislatures and governors. Such episodes raised several enduring questions for me—questions which I guess will accompany me “forever,” if the *History of Education Quarterly* editors have their way. First, why is it that many state university presidents who never have time to read a book while in office suddenly think they can *write* a book when they retire from office? A second and related question is when they do tend to writing and speaking, where are they acquiring their notions of the historical context of higher education?

The after dinner talks about state funding woes have been especially troubling to me for two reasons. First, on what basis do they make their claims? How would they know one way or the other whether state funding as a part of their university budget has risen or declined? Second, how should I reconcile their bold claims when my samples and selected forays cast doubt on the accuracy of their claims? This is an issue that connects past and present and that commands my long-term interest and attention. In order to probe and explore, it requires good historical data on academic budgets. As Sherlock Holmes exclaimed in exasperation to Watson, when baffled by a case: “Bricks without straw! Bricks without straw!” Holmes could not create the bricks to build his case without the straw of data. Neither can I. But it is the absence of good historical data that allows state university presidents to abuse history by making facile, untested claims.

Statistics ultimately involve logic. And here I have relied on a memorable book, David Hackett Fischer’s *Historians’ Fallacies: Toward*

⁴James Axtell, “The Death of the Liberal Arts College,” *History of Education Quarterly* 11, no. 4 (Winter 1971): 339–52.

A Logic of Historical Thought.⁵ One of the weak points of most state university presidents' claims has been that they commit one of the most fundamental errors of statistical argument—they present percentages without providing the undergirding numbers. For example, to say that “In 1910 the state provided 90% of our annual operating budget—and today it is 20%” implies a drastic decline in state appropriations. This is not only silly, it is disingenuous. If one exhumes the records and accounts of a state university in 1910, one usually finds a relatively small institution with primary commitment to a range of undergraduate programs, a few masters' programs, and a very small number of doctoral programs. There are no federal research and development grants outside of land grant appropriations. Programs and affiliations that are central today—such as medical centers, hospitals, research parks, not to mention institutes, and centers funded by private donations—are pretty much nonexistent. What actually happened was that the programs under the auspices of a state university have become larger, more complex, and more numerous. So, as the budget pie increases in size, an institution can have state appropriations simultaneously increasing substantially in dollar amount while decreasing as a percentage of the total budget. But one probably would not know this if one relied on state university presidents and their speech writing offices.

This is the kind of issue in state and federal policy deliberations where historians of higher education can make a good contribution to the forum. A second area where I plan to devote at least several centuries to reading, research, and writing is the enduring issue of how students and their colleges fare in the matter of admission, retention, graduation, and attrition.

I am obligating myself to an extended research venture that I call, “Cliometrics and the Campus Condition, 1910 to 2010.” My caveat to colleagues is the emphatic note, “What a Difference a Century Makes!” “Cliometrics”—historical statistics or what might be termed “Historical HEGIS” (in honor of the HEGIS federal database of the 1970s) is an earnest attempt to bridge past and present through compilation and analysis of comparable statistics over a long stretch.⁶ One reason I am grateful to have been part of such programs as social foundations of education or, later, programs in the study of higher education, has been the opportunities for informal discussion and collaboration across disciplines. I am indebted to Professor Leonard Baird, highly respected editor of *The Journal of Higher Education*, and to the late Charles F.

⁵David Hackett Fischer, *Historians' Fallacies: Toward A Logic of Historical Thought* (New York: Harper Torchbooks, 1970).

⁶John R. Thelin, “Cliometrics and the Colleges: The Campus Condition, 1880 to 1910,” *Research in Higher Education* 21, no. 4 (1984): 425–37.

Elton, Professor of Higher Education, whose own disciplinary backgrounds were in psychological research, with a strong emphasis in rigorous statistical analysis. Best of all, not unlike Carlo Cipolla, here were two nationally eminent statistical researchers who were both wary and weary of the proliferation of bad statistical studies. They have provided the most interest and encouragement in my attempts to bridge past and present—and to rely on the context of statistics about higher education to provide an antidote of sorts to suspect statistical inferences.

Nowhere has this been more evident than in the volatile issue of database analyses dealing with college students' patterns of enrollment, retention, and attrition. All too often state legislators or even members of Congress would berate colleges for their inefficiency, for their wasting of human potential as indicated by high attrition rates. This is, yes, a reasonable and important concern. What was troubling to me was that implicit yet untested in their allegations was that there was some golden era in which college students lived on campus, attended full time, and graduated in four years. As an academic agnostic, I wanted to believe this but could not quite push myself to take this leap of faith. So preoccupied was I with this question of past and present that I almost became "data driven"—and most likely, driven to drink due to its accompanying exasperation . . .

My research rehabilitation was to try my own hand at securing some fresh, systematic estimates on how college students fared a century ago. Once again I depended on the insights and suggestions by longtime colleagues. In this case, it was Professor Paul H. Mattingly, who had been editor of *The History of Education Quarterly* and Professor at New York University. Where Mattingly was especially original and influential was in his essay, "Structures Over Time," one of the most provocative discussions of thoughtful ways to view institutional histories in their complexity and richness.⁷ His particular influence on my conceptualizing research problems surfaced, in part, when I was trying to reconcile profiles of universities a century apart. For example, the official annual reports by college and university presidents tended to present a rosy picture—with summaries of enrollment of freshmen, sophomore, juniors, and seniors. What prevented me from accepting their word at face value was that, for example, in one report the sophomore class was substantially larger than it had been a year earlier as freshmen. What became clear was that enrollment reports were tantamount to ball park attendance estimates. Neither baseball team owners nor college presidents cared much *who* attended, so long as

⁷Paul H. Mattingly, "Structures Over Time: Institutional History," in *Historical Inquiry in Education: A Research Agenda*, ed. John Hardin Best (Washington, DC: American Educational Research Association, 1983), 34–55.

they were paying customers. But if the question concerned the ability of students to persist from freshman enrollment to senior year and to graduate with a bachelor's degree, the aggregate data were unsatisfactory and even downright misleading. At the same time, highly publicized contemporary studies, such as *Crossing the Finish Line*, a 2009 study of college completion at America's public universities, was sophisticated and comprehensive in its analysis.⁸ But its obvious limit was that it was a prisoner of its reliance on federal databases—which meant that the study could say a lot about what has happened since 1980, but was hamstrung in analyzing statistics from earlier decades.

To supplement the contemporary study with an historical perspective, I drew from my experience in institutional and policy research working with contemporary enrollment and retention. The strategy, made possible in an era of IPEDS and HEGIS, was known as “cohort tracking.” According to this strategy, the researcher took the enrollment roster of entering freshmen at a college and then tracked each student, name-by-name, over four or five or six years. This was painful and slow. What my preliminary studies showed for six institutions in 1910—Harvard, Amherst, Brown, William & Mary, Transylvania, and University of Kentucky—was that the clean, systematic retention, and graduation rate shown by cohort tracking was substantially less than the official summary reports. And, important for contemporary concerns about low retention and graduation rates, I found widespread evidence of stopping out, dropping out, transferring, and failure to complete degrees among the institutions in 1910. So, my hypothesis was that American higher education has a “Tradition of Attrition.”⁹

But that is just the start. I hope you will follow my progress, whether on Facebook or some other media. This and my related cliometric research projects suggest that for the future, “the rest is history.”

⁸William G. Bowen, Mathew M. Chingos, and Michael S. McPherson, *Crossing the Finish Line: Completing College at America's Public Universities* (Princeton, NJ: Princeton University Press, 2009).

⁹John R. Thelin, *The Attrition Tradition in American Higher Education: Connecting Past and Present* (Washington, DC: The American Enterprise Institute Future of American Education Project, 2010).