

Humanism and Quantitative Literacy

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*The President of Harvard College, seeing me once by chance soon after the beginning of a term, inquired how my classes were getting on; and when I replied that I thought they were getting on well, that my men seemed to be keen and intelligent, he stopped me as if I was about to waste his time. 'I meant,' said he, 'what is the number of students in your classes.'*¹

—George Santayana,

Character and Opinion in the United States

With some hesitation, I invite you to consider Santayana's simple parable. This brief remembrance is one that he first recounted in a lecture delivered in England near the end of WWI. The incident itself, however, happened many years before, in the early 1890's, when Santayana was a junior member of Harvard's philosophy department. The impatient (and here unidentified) president in the story is Charles Eliot who, at the time this encounter took place, was widely regarded as the most influential educator in the United States. Although they are colleagues, there is no cordiality indicated in the meeting of the two men. Nor, almost three decades later, is there even a hint of any in its recollection.

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The absence of good feeling in this encounter is, I believe, an emotional fact worth our close attention. In its details, of course, the incident does not seem to present a quantitative problem of any difficulty or interest. Hence my hesitation in calling it to your attention. Indeed, we know from other sources that Santayana would have had no trouble supplying the number that Eliot demanded from him. At this time, he tells us, the students in his classes numbered no more than a handful—there were only three or four undergraduates, for instance, in a course on the British Enlightenment that he had inherited from William James. So, in a strict sense, there is no quantitative issue here that involves anything other than the most rudimentary arithmetic.

Is this a case, then, in which Quantitative Literacy (QL) has little or no work to do? The answer depends, I believe, on how much we should make of the claim that QL informs us about numbers, not in the abstract, but in the many ways we meet them in life itself.² Here, for instance, what occurs in this encounter amounts to much more than an exchange of quantitative data. In Eliot's mind, as the young Santayana knows, three or four students in a class translates directly into a moral judgment—in sum, it means not enough, too few, a weak showing. Moreover, it further signifies that Santayana is failing to do his share and, very possibly, may be making less than a full effort. Taken in context, therefore, the number in question cannot be understood apart from its moral reverberations. In effect, numbers and feelings are so closely joined as to be inseparable and thereby combine in this instance, as they so often do in life, to make a moral event. How, if at all, should QL approach such events? Only arithmetically? Or is it attentive to them in a more complete sense and, if so, to what end? Addressing these questions here at *Wingspread* might help clarify the role of QL in a liberal education.

Here, in the beginning, something more might be said about Santayana's meeting with President Eliot. Briefly stated, what happens in this encounter? Outwardly, of course, very little. By chance, the two men come together, exchange a few words, and then go their separate ways. Inwardly, however, much changes for the young Santayana. Suddenly, he finds that the world is very different from what he thought it to be. In effect, the question that Eliot puts to him conveys that the worth of philosophy—or any subject—should be derived from the number of students that it can attract. For Santayana, this intrusion of market standards rendered the environment almost unrecognizable. What, innocently, he had believed to be a sanctuary of the intellect now confronts him—in the person of the president—with a setting dominated by the rule of quantification and a crude regime of numbers. From one moment to the next, then, his own alma mater, Harvard, had become a strange and oppressive place.

If he noticed Santayana's discomfort at all, it is unlikely that Eliot felt it to be of any significance. Doubtless, he considered the question he asked to be of the utmost importance and entirely in order. Writ large, in fact, it reflected a policy of "quantitative aggrandizement" then evident everywhere in American education.³ In promoting this policy, Eliot himself had warned that the very survival of the American college depended on its keeping pace "with the growth of the country in population and wealth."⁴ This meant, in practice, that the college must seek to have more of everything—money, students, buildings—and to gain these things it, above all, must include "all subjects" in its offerings and leave the choice among them entirely open to the election of students. Without a prescribed curriculum of its own, then, nothing could narrow a college's chances for growth. No matter that an absence of any uniformity in the learning of students made it difficult to give "clear meaning" or ascribe "exact significance" to the baccalaureate degree. For this, too, Eliot had a quantitative solution. As it had in the past, he said, the degree should still testify to the "main fact" that "the recipient has spent eight or ten years, somewhere between the ages of twelve and twenty-three, in liberal studies."⁵

Although much more could be said, this perhaps is where we should leave the Eliot-Santayana encounter. Suffice it to note that Santayana's discomfort in the American academic environment only intensified during the years that followed this incident. With a sense of profound relief, he eventually fled Harvard and thereafter rejected all offers either to return there or to accept a chair in any other American university. Moving on, though, I now want to discuss how this case is an illustrative one. Examining the historical record, we can see that many of Santayana's contemporary humanists shared the same feelings of discontent with Eliot's "new education;" and this, I believe, helps account for why they gave quantitative matters so little consideration in their approach to student learning. Without much exaggeration, one could even say that they entirely banished quantitative issues from their vision of a liberal education.

This, I might add, was essentially the character of my own educational experience. As an undergraduate, my studies were mostly of a humanistic nature; and, looking back, I cannot recall even once being asked to address a serious quantitative question in completing a large array of courses devoted to history, literature, philosophy, and the arts. This surely contributed to my becoming quantitatively oblivious; and later, as a teacher myself, I in turn never asked my students to attend to any of the quantitative problems lurking in the texts that we read together. Until very recently, in fact, I do not think that I noticed that they were there.

My own experience, then, suggests that an aversion to numbers has a long history in the so-called humane studies. Why this antipathy to quantification?

What is its origin? In part, at least, its beginnings can be traced to the “anxiety” felt by Anglo-American humanists when, in the late 19th century, they looked ahead to the looming dominance of a mass democracy.⁶ As they saw it, this threat of an overwhelming deluge of numbers placed civilization itself in grave peril. In 1884, for instance, Matthew Arnold delivered a lecture in the United States that he entitled “Numbers; or the Majority and the Remnant.” His main intent in this address was to warn his listeners about the dangers of becoming enthralled by the large numbers that made up so much of the data typically brought forth in praise of American life. To be sure, he said, these facts were undeniable and seemingly very impressive. Citing a fellow countryman, he told his listeners:

The vast scale of things here, the extent of your country, your numbers, the rapidity of your increase, strike the imagination, and are a common topic for admiring remark. Our great orator, Mr. Bright, is never weary of telling us how many acres of land you have at your disposal, how many bushels of grain you produce, how many millions you are, how many more millions you will be presently, and what a capital thing this is for you.⁷

This, of course, is said ironically. In plain speech, Arnold means that all this talk of abundance is tiresome stuff. Worse yet, such boasting about material things weighs heavily on the spirit and is deadening to the soul.

More sermon than lecture, Arnold’s talk holds fast throughout to a single message. The Americans may be a people of plenty, he says, but morally this has placed them at risk of identifying goodness with quantity—that is, of mistaking more for better and most for better yet. For correction, therefore, they should look to the lessons of tradition, to the wisdom that resides—as he famously put it—in “the best which has been thought and said.” There they will be reminded that the “sages and saints” always have warned that the multitude is “unsound” and not to be trusted. More positively, they also will find the teachings that make up “the doctrine of the *remnant*.” This guidance conveys the good news that a few, an elect, can protect against the failings of the many and spiritually uphold an entire culture. In some variant or other, of course, this belief that the masses should (and will) allow themselves to be led by a priesthood or an elect of some kind would long continue to influence the evolution of American education.

During his lecture tour, Arnold also emphasized that the doctrine he preached had a direct bearing on educational arrangements in the United States. It meant that the aim of the university, above all else, should be to nurture this much-needed “saving remnant.” In turn, this task required that

the work of the university should be devoted to the transmission of tradition and, therefore, that study therein should attend to a core curriculum that was literary, classical, and morally earnest in its orientation. Rejecting any such dwelling on the past, Eliot had said that the university should seek its fortune in the here and now, embrace American life, and grow along with it. Arnold, in contrast, urged that this teeming activity be kept out of collegiate education. Both held that students should be led “to think,” but, for Arnold, thought was reflective, a turning inward, and directed in each person toward development of a “best self.” If study remained true to this aim, the university could hope to produce a leavening cadre of “workers for good.” Necessarily, of course, such an approach envisioned an exalted role for both faculty and students. For the sake of the culture at large, they were to serve as nothing less than a clergy of the intellect and keepers of the spirit.

In essence, what Arnold advocated was a somewhat spiritualized version of an Oxbridge college. During the years that followed, this in fact became the model that most humanists favored and hoped would prevail in American undergraduate education. More than any other option, this ideal provided their own basis for self-understanding and sense of vocation. They knew, of course, that their views were in conflict with the utilitarian model promoted at this time by Eliot and most other university presidents. In a concrete instance, we glimpsed this clash in the Eliot-Santayana encounter. On a larger scale, this also was the drama that Henry James saw unfolding when, in 1904, he revisited Harvard after an absence of twenty years. An admirer of Arnold, he had hoped on his return to find something resembling an American Oxford—quite literally, as he put it, to walk into a cloistered haven “inaccessible...to the shout of the newspapers, the place to perambulate, the place to think, apart from the crowd.” In contrast with Eliot, then, he thought that Harvard should provide an “antidote” to the life that surrounded it. The image he invoked was that of a “university...stamped with the character and function of the life-saving monasteries of the dark ages.”⁸But, instead, what he found happening on the ground was a dimming of this ideal. This weakening, moreover, was not due to the world pressing in and encroaching upon Harvard. On the contrary, much to James’ regret, he saw that a “restlessly expansive Harvard” had acquired an impetus of its own and was now actively “stretching forth, in many directions, long, acquisitive arms.”

The humanists, then, had wanted the American college to remain enclosed and be kept small. By 1900, however, most of them recognized that this was a lost cause. Enrollments in college were increasing almost everywhere; and the prevailing educational policy opposed all efforts to place limits on growth. With few exceptions, the humanists acquiesced in the face of these dominant

trends; but they remained uncomfortable with the conditions that resulted. They were puzzled, most especially, by student motives for attending college. Why were they coming in ever-mounting numbers and what were they seeking? The answers to these questions turned out to be perplexing. All too few students, it seemed, shared the faculty outlook on the undergraduate experience. If asked, a humanist would have advised the student to think of college work as embarking on an “adventure of ideas”—or, as John Dewey put it, as setting out on a “voyage,” a “travelling of the spirit.”⁹ As it happened, though, most students were not attracted to an intellectual journey of any kind. Instead, they had enrolled in college to secure social advantage, a required credential, or, in a large number of cases, with only the vaguest notion of what they wanted or needed. Moreover, many of these students came to college from high schools that had ill-prepared them to undertake challenging work. Taken together, all of this presented an awkward quandary that humanists found difficult to resolve.

Given these circumstances, what should the humanist do? In 1917, this was the question that Carl Becker put to himself in an irony-laden essay entitled “On Being a Professor.” Then on the faculty of the University of Kansas, Becker later moved to Cornell and, over time, would become the most respected historian of his generation. Here, though, he presents himself as a bewildered Arnoldian—that is, as a humanist who belatedly has discovered that his educational aims are in conflict both with the “Zeitgeist” and the facts of the classroom. As a beginning teacher, Becker says, he believed that faculty and students together should think of “four years in college” as “a wonderful adventure in the wide world of the human spirit.”¹⁰ After teaching for two decades, however, he had come to accept that very few students joined him in this point of view. There simply could be no denying that most of those under his care, like humankind generally, did not “hunger and thirst after knowledge, anymore than after righteousness.” For Becker, this was a troubling recognition. What, he asked, was his duty toward this growing body of students? Did he “best serve...by attending mainly to the great majority or by attending to the saving remnant.” The answer to this question, Becker thought, determined whether the professor aimed “to make the university a school of higher education or merely a higher school of education.”

But perhaps this question need not be asked. Maybe, Becker admits, the humanist lives too much in the past and wrongly clings to antiquated ideals. For a different approach, why not try to get in step with the new doctrine of “efficiency” recently imported into education from American industry?¹¹ This quantitative ethic, Becker finds, proclaims that the only questions worth asking about “any educational institution or course of study” are “whether it has a practical value, whether it has a measurable value, and whether its value

is equal to its cost.” To get “on the right track,” therefore, humanists need first to stop bothering about all those “elusive” qualities of intellect and spirit that they, up to now, have believed to be at the heart of a true education. And why not do this? After all, could they any longer provide a compelling (or testable) definition of the wisdom and virtue they thought so important? If not, perhaps the “qualitative arithmetic” taught by the efficiency experts should be welcomed. In applying it, one:

had only to count, an extremely easy thing to do, and very precise in its results. One had but to count the students in all the universities to determine which was the greatest university, the enrollment in all the course to determine which was the best course. That student was the most liberally educated who obtained the best paying job. The ablest professor was the one who accumulated the most degrees, or printed the most books; while the most efficient was he who taught most hours in the day, or whose name was attended with the longest retinue of varied and noted activities.

Here, then, was a creed that promised an “easy solution” for “all the great problems of education”? To share in this new dispensation, the humanist had only to surrender the fundamental tenet that spiritual and material values should be considered of “a different order altogether” and, in consequence, also cease to insist—as they had long held—that the former can neither be “fostered nor measured by means... appropriate to the latter.”

Becker, quite obviously, hopes that his fellow humanists will not be tempted to make any such move. His tone throughout bespeaks utter scorn for a doctrine that proposes to quantify what can only be qualitatively discerned. But nowhere does the essay become a call to battle. Instead, Becker counsels a policy of resignation. In the reigning climate of opinion, he says, conditions favor and support the efficiency experts. And, unhappily, the *Zeitgeist* “is useless to resist, however little one may enjoy it.” So, for now, the humanist should expect that “efficiency” will continue to draw strength from its pledge “to bring education into harmony with the main trend of thought in society at large.” Lacking any convictions of its own, Becker laments, the university will always try to mimic the practices that prevail in business, industry, and finance. Moreover, students themselves will prefer to be credited with a numbering of the hours of study they endure rather than be judged for the quality and spirit of their learning. Therefore, given these conditions, humanists must accept the fact that they will appear to be “late survivals” of an outworn tradition. Prudence dictates, then, that they seek a “sheltered corner” in the university and, from there, await the coming of a different time. And what about the

spectre of efficiency? Becker's message, in the end, seems to be that this, too, will pass.

Many humanists shared Becker's discomfort with the "qualitative arithmetic" that ruled the university, but I do not suggest that all joined in his resort to quietism. Some, indeed, were quite forceful and direct in their opposition. Of these, Lionel Trilling should be counted among the most articulate. Arnold's biographer, Trilling was one of the most—perhaps *the* most—distinguished humanist of his time (roughly 1945-75). His cultural criticism was wide-ranging, and, running through it, one often finds an insistence on the greater value of the humanities relative to the number-driven social sciences. In fact, in his carefully-wrought essays, one sometimes can sense that he is morally incensed by the power that the social sciences have come to wield both in the academy and society at larger. This indignation perhaps reached a peak in a review of the Kinsey Report that he wrote shortly after this study appeared in 1948. Here Trilling addresses in detail what he sees as the ambitious intent of social science to "speak decisively" about a matter—sexual conduct—that, in its moral bearings, traditionally "has been dealt with by religion, social philosophy and literature."¹²

Trilling's approach to Kinsey's report is that of a cultural critic. Never, that is, does he directly reproach Kinsey for employing flawed statistical methods, making errors, or drawing wrong conclusions—though he leaves no doubt that he believes the report to be defective in all these ways. Instead, he accuses Kinsey of being duplicitous in that his report conceals its true aims from the public. The huge fault of the report, Trilling says, is that it claims to be indifferent "to all questions of morality at the same time that it patently intends a moral effect." Moreover, he adds, all social science shares in this same guilt when it refuses to honor—and make the best of—the subjectivity that necessarily pervades all of its investigative projects. Kinsey, then, stands out only as a very striking case of a much larger failing.

This failure is all the greater, Trilling argues, because it is one that social scientists could easily correct. All they need do, he asserts, is to give up the pretense of "objectivity" and accept that their work, unavoidably, is shot through with moral judgments from beginning to end. They refuse, however, to make any such admission, taking a stance instead based on claims that they—and others—make for the "neutrality" of numbers. Here, particularly, Kinsey serves to illustrate the point. As described by Trilling, Kinsey is a behaviorist to the core. This point of view commits Kinsey to the belief that human sexual experience can be reduced to physical acts of a range and kind observable throughout the natural world. So, having dismissed any semblance of social context or inner sense from his concept of experience, he further narrows the

meaning of sex to only those acts that can be counted and numbered. These alone are the “facts,” and there is no other admissible evidence of our sexual nature. In this way, Trilling points out, “the sexuality that is measured is taken to be the definition of sexuality itself.”¹³ From such a standpoint, then, “normality” in sexual behavior becomes entirely a matter of amount and frequency—and this, he observes, leads Kinsey to promote an ethic of “the more the merrier.” What empirical finding, Trilling adds, could be more pleasing to the male animal?

In Trilling’s estimation, furthermore, Kinsey’s work is not only reductive. It also is redundant, and this perhaps is its most disturbing defect. Does the public really need such an extensive quantitative effort to provide it with sexual self-enlightenment? And why should the Rockefeller Foundation and the university have lent this project their authority and favored it with such lavish financial support? These questions, Trilling says, should come to mind when we consider that all the report tells “society as a whole is that there is an almost universal involvement in the sexual life and therefore much variety of conduct.” This, after all, is something that could be gathered, at little or no cost, by turning to “any comedy that Aristophanes put on the stage.” This, source, however, is one that now is little read and seldom consulted. Sadly, Trilling complains, the same must be said about our literary heritage in its entirety. No one, for instance, could imagine a foundation promoting a return, say, to Lucretius, even though this ancient poet tells us far more about the nature of human sexuality than can be found in the many pages of the Kinsey Report. This, Trilling says, reveals what has become the “established attitude” both among foundations and in universities. In these settings, as well as in the culture at large, quantitative data always trumps literary testimony. So, more than anything else, the Report should be viewed as symptomatic of the kinds of intellectual projects that really count and those which are only marginal. Most especially, the humanists must wake up to this fact and perhaps even be moved to lose their collective temper. Even though civility may suffer, Trilling concludes, such conditions call for resistance rather than restraint, redress rather than retreat.¹⁴

Here, with Trilling, we have come to the limits of this essay. Taken together, then, what do these case studies tell us? How do they add up? Most especially, what response might the advocates of QL want to make to them? These are questions that I hope we can discuss at Wingspread. For my own part, though, I believe it worth bearing in mind that humanists seem always to have kept a worried eye on quantification. Whatever else they reveal, these case studies do not bespeak indifference. All join Santayana in finding American culture pervaded by a “singular preoccupation with quantity.” Often their reaction to this fact has been more emotional than judicious, as much

moralistic as analytic. In their view, the cultural workings of quantification have been overbearing and bent on crowding out attention to spirit. To this felt threat, they have pushed back and attempted to hold the quantifiers at bay. In consequence, opposition to quantification has become deeply-seated in the heritage of humanism. Oddly enough, I believe that this adversarial legacy may present an opportunity for QL as it attempts to find allies among and across the liberal arts disciplines. Proponents of QL should consider inviting the humanists to turn first to their own texts as a means of revisiting their stance toward quantification. This, I believe, is much more likely to produce true engagement among humanists than asking that they retrain themselves in sophisticated quantitative methods. Whatever the outcome, humanists are more likely to enter the conversation—and remain involved—if they can begin on familiar ground. At the same time, this also would bring QL into contact with documents and texts about which it so far has had little to say. Here, then, might be found the makings of a genuine conversation.

No one can be sure, of course, that this conversation will be a productive undertaking. Even beginning a cross-disciplinary discussion of this kind will be difficult given the fractured condition of the American educational enterprise. Current circumstances, however, may not be entirely unfavorable to making a start. Albeit not yet in a single voice, many humanists now are calling for a thoroughgoing reconsideration of humanistic practice; and this self-questioning could open new, if still untried, paths through the academic hedgerows. Edward Said, for instance, has urged in a recent series of lectures that his fellow humanists turn from the old “unthinking Arnoldian way” and recognize that “the humanities and humanism are constantly in need of revision, rethinking, and revitalization.”¹⁵ Trilling’s younger colleague, Said argues that humanists must work to shed the bias toward “withdrawal and exclusion” that has been inherent in their practice and to turn instead, as participatory democratic citizens, to a critical encounter with the “world of contemporary history, politics, and economics.” In everyday practice, this means that humanists should attend to an almost limitless array of texts that takes in not just “rarified” literary masterworks but, among others, also includes documents such as policy statements, political pronouncements, and editorial arguments. Said emphasizes that the primary critical concern of the humanists must be with the “language” of these texts, but surely, in taking this direction, the humanist will encounter a language that is laced with quantitative concepts and replete with numbers. When this occurs, one might think that the humanist will be ready to enter into a conversation about how words and numbers mix in our public language in such a way as to act and react upon one another and together join in making meaning. This, anyway, is what I like to believe will happen.

Endnotes

¹ The emphasis is Santayana's own.

² On behalf of a Design Team, Lynn Steen writes that QL "clings to specifics, marshaling all relevant aspects of setting and context to reach conclusions." *Mathematics and Democracy: The Case for Quantitative Literacy*, 18.

³ Laurence Veysey, *The Emergence of the American University*, 338.

⁴ Charles Eliot, "What is a Liberal Education," 1876.

⁵ Eliot, *ibid.* [In making this statement, Eliot assumes the existence of an integrated school-college continuum. He also supposes that the American high school eventually will become an educational institution comparable to the German *gymnasium* and the French *lycee*. It is interesting to note how many of the educational policies from this time are still in force even though many of the presuppositions underlying them have never panned out.]

⁶ Alan Ryan, *Liberal Anxieties and Liberal Education*, 53-94.

⁷ Matthew Arnold, "Numbers: Or, The Majority and the Remnant," in *Discourses in America*, 5.

⁸ Henry James, *The American Scene*, 45-6.

⁹ John Dewey, "A College Course: What Should I Expect from It?" *Collected Works, Volume 3, 1889-1892*, 52.

¹⁰ The leading advocates for "efficiency" were known as "educationists" and most held positions in major schools of education. Their agenda promoted displacement of disciplinary frameworks in favor of a curriculum organized around a quantification of common activities in categories of "everyday life, e.g., such as health, family, and leisure." This assault on the disciplines led to an estrangement of liberal arts faculty from schools of education that persists to this day. For an extended discussion of this matter see Robert Orrill and Linn Shapiro, "From Bold Beginnings to an Uncertain Future," *American Historical Review*, (June 2005), 727-51.

¹¹ Carl Becker, "On Being a Professor," in *Detachment and the Writing of History*.

¹² Lionel Trilling, "The Kinsey Report," in *The Liberal Imagination*, 216-34.

¹³ In a like manner, psychometricians define intelligence as those limited aspects of "intelligence" that their instruments enable them to measure

¹⁴ A personal note. I have been on the receiving end of Trilling's anger and know at first hand that his own renowned civility, though admirable, also had its limits.

¹⁵ Edward Said, *Humanism and Democratic Criticism*, (2004), pp. 31-56. These lectures were delivered just prior to Said's untimely death.