

Reasserting the Values of Liberal Education in
the Second Machine Age: A View from America
**在第二次機器時代中通識教育之價值：
美國觀點[§]**

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We gather here in conference to consider the current significance of the classics and college education in a time of transformative and globalized technological change—what has been called the Second Machine Age.¹ The perspective I bring to this task, as an historian of the United States, may seem limited, even parochial, albeit coming from one who first came from outside that country to study and teach its history. Yet "a view from America," I believe, provides insight into both the problems we face and the ways we might go forward.

For Americans have long taken the matter of education seriously, even as they were settling—some would say invading—the fringes of what they saw as a new world. For some, their goal was to ensure the preservation of a godly commonwealth, providing for schools lest that "old deluder, Satan...keepe men from the knowledge of the scriptures" as the famous Massachusetts law of 1647 ordained. Schooled as I was myself in a mid-sixteenth century "Religious and Royal Foundation" first founded in a vacated London monastery, I can empathize. Soon, the colonists would broaden their educational curriculum to include the grounding in the liberal arts needed not just to turn out ministers for their pulpits but to cultivate a genteel elite qualified to lead their societies and shape their governments. Engagement with classical literature, be it theological or secular, remained important: "the remains of the ancients" declared the president of the new college at Princeton "are the standards of taste."²

As English America seceded to form independent states, its leaders debated how to nourish and sustain civic virtue in that form of political association derived from the classical past, a republic. More than half the delegates who gathered at Philadelphia to write a new constitution for the United States were

1 Eric Brynjolfsson and Andrew McAfee, *The Second Machine Age: Work, Progress and Prosperity in a Time of Brilliant Technologies* (New York: W. W. Norton, 2014).

2 John Witherspoon, "Introductory Lectures on Divinity," in *The Works of the Reverend John Witherspoon*, vol. IV (second edition, Philadelphia: William Woodward, 1804), p. 20.

college educated at a time when less than one percent of the general population had been to college.

Yet even as these delegates debated the opinions of classical authors on the value and nature of confederacies, there was already beginning a debate over what could be prescribed as useful knowledge for citizens of the young republic. Could men derive wisdom, asked one critic, only by diving "into the gloom of antiquity"? Do teachers "use Latin and Greek much as the scuttlefish emit their ink, to conceal themselves from an intercourse with the common people?"³ Education, in short, must have practical value, be more widely imparted and shared; moreover, its dissemination was increasingly conceived as a public responsibility, an instrument of policy for advancing individual self-development in ways that would further the welfare and prosperity of society as a whole.

By the mid-nineteenth century, therefore, to provide an educated work force, almost every northern state offered free schooling for young children, and most southern states were moving in the same direction. At the level of higher education, states were now establishing publicly-chartered and -supported colleges, many funded by federal land grants designated to foster, not a classical education but training in what was termed "agriculture and the mechanic arts," skills as much manual as intellectual. The unified course of study gave way to "electives" and specialization in specific disciplines. By the end of the century a third of a million Americans—and a third of these women—would be enrolled in the country's multiplying colleges, the start of what would expand to twenty million students in 4500 colleges today.

Above all, as America industrialized, in its first "Machine Age," education was called upon to provide training for a new range of skilled careers, for

3 Meyer Reinhold, *Classica Americana: The Greek and Roman Heritage in the United States* (Detroit: Wayne State University Press, 1984), p. 107; Benjamin Rush to John Adams, July 21, 1789, in L. H. Butterfield (ed.), *Letters of Benjamin Rush*, vol. I (Princeton: Princeton University Press, 1951), pp. 524-525.

scientists, engineers, doctors, corporate lawyers and executives, even farmers and housewives. It was an age of the rise of the professions, at a time when the state itself had become envisioned less as a moral community united by law and more as an enterprise association responsible for bettering its individual members' physical well-being. The heroic figures of late 19th-C America were not the liberally-educated and disinterested statesmen of the kind who had written the Constitution but captains of industry—indeed those now seeking political careers were all too often pursuing economic advancement by other means.

And among these emerging professions was that of education itself, as the most prestigious schools, public and private, moved to adopt the model of professional educational training developed in Germany—the most dynamic of late 19th-C industrializing powers—in developing doctoral programs aimed less at training teachers than in fostering the advancement—or more precisely—the *production* of knowledge. Scholarly research rather than teaching became the standard for professional advancement and was the more valued when it was seen to have economic, worldly application. Such application, such "value" for society, was visibly apparent for study in the hard sciences. The emerging social sciences could stake a somewhat different claim as a college such as the University of Wisconsin became known as a "laboratory for democracy," educating economists and sociologists who engineered the state's adoption of Progressive political and social reforms. Nationwide, secondary schooling in the knowledge of the nation's history and civic practices was deemed essential to integrating successive waves of immigrants into American life. For the humanities—the traditional core of liberal education—such social value was less apparent. Successive generations of historians might claim that their discipline was "a science, no more and no less," literary scholars might boast of their precision of their editing and analysis of canonical texts, but this was also accompanied by frequently expressed and well-justified anxiety at their professional conventions that their work not only had little application to the real world of social and economic advancement but was becoming disconnected from

popular culture and appreciation. There was an uneasy recognition that their professions had collaborated in heightening public perceptions of their irrelevance.

These changes that took place in American education—accompanying a larger national transformation from farm to factory, from avocation to profession, from elitism to mass production—shaped its course of development through the twentieth century. In justice to a lingering respect for tradition, it must be said that American colleges sustained an emphasis on a breadth of education and a knowledge of the classics through introductory courses that—in my experience—has vanished from their European counterparts. But this has come increasingly under threat; and the challenges to the value and utility of liberal education as traditionally defined have now been intensified by the dramatic changes of the last three decades, with the digitalization and globalization of knowledge, this Second Machine Age, one in which the United States has been prime mover and shaker.

In what ways has this occurred? Does their nature bring new challenges compared to its predecessor, and require different responses? At their core lies what has been what has been called "the digitalization of just about everything," revolutionizing the gathering and processing of information.⁴ Vast masses of data—megadata—can now be called up for analysis, not just within classrooms and libraries, but from anywhere and by anyone with access to the worldwide web. Within the world of liberal arts education, this has only accentuated what I have described as a focus on the production of knowledge, enhancing the range and digitally-enhanced sophistication of the research requisite for professional recognition and advancement. Those studying what President Witherspoon called "the remains of the ancients," can call up a virtual digital necropolis, a searchable databank containing all known classical Greek and Roman texts.

4 Brynjolfsson and McAfee, *Second Machine Age*, p. 57.

Meanwhile, the task of teaching students, one increasingly being delegated at America's colleges to temporary faculty, can now be sent out of sight—and hence, I would suggest, increasingly out of mind—to online courses presented under the optimistic euphemism of "distance learning." Such a form of education only contributes to the way in which communities operating through face-to-face contact and conversation are giving place to those operating through electronic devices, redefining proximity as connection. But can you really hear me now?

Simultaneously, the digital revolution has intensified the pressures for public education to teach what are deemed to be the needed educational tools. Public officials in several American states have announced that they will not subsidize college teaching of the liberal arts, others that they will earmark funds exclusively for the teaching of the so-called STEM disciplines of Science, Technology, Engineering, and Mathematics. As I speak, the federal government is seeking to provide a classification of colleges according to the value, the returns, and the "through-put" to graduation they provide for student (and governmental) investment in undergraduate education. Students have made their concerns known through the substantial decline across the board of enrollments in humanities and social sciences in the last five years.

Taken together, these trends and demands may seem to press the cause of liberal education to the brink of irrelevance. Yet I believe that this is to misconceive and misdiagnose what our new circumstances require.

For, at the level of sheer practicality and by comparison to the first industrial age, the skills and capacities required to advance are now more cerebral than manual, or to use the new terminology, more requisite of programming than fabricating. Pablo Picasso's taunt that computers "are useless, they can only give you answers," though colorfully exaggerated, nonetheless points to the fact that machines of the present age can only function when fuelled by human-generated questions, concepts, and ideas, and ones inspired by larger visions of the

parameters of societal growth than the programming of robot workers or the perfection of the tools of on-line marketing. From what kind of educational training can such ideation and conceptualization come?

And here I would link back to my earlier account of American educational development. Putting it crudely, I believe that American liberal education has been skewed by its professionalization, by its efforts to match up with other disciplines in producing knowledge and rearranging data. For it has turned out that we were producing knowledge deemed of insufficient social value in a changing world, breeding, as it were, carhorses not tractors or computers. What is needed is a renewed focus on the impartation of learning. We must reinvent our classrooms to be less filling stations for the transmission of information and more ones that empower students to develop skills of conceptualization, ethical judgment, critical analysis and persuasive communication—the skills of higher-order thinking that our modern world requires. If lecture we must, we have to escape the danger, heightened by the expectations and habits of the digital age, of being passively received as a succession of images on a screen, providing episodes of a kind of daily soap-opera. There must be interaction and mutual communication, teaching students how to form hypotheses and communicate their own assessments and analyses. Such responses can emerge in discussion and dialogue. But above all it emerges through the process of writing, and preferably—and this is the suggestion of child psychologists studying cognitive development—by hand and not on a computer. Writing produces the precision and clarity of expression that moves students to take an active part in their own learning. So, require evidence-based written work to be brought to class to fuel and give substance to discussion, require it in class to distill and summarize what has emerged. Assign papers that necessitate students, in the words of the prayer-book, "to read, mark, learn, and inwardly digest"—and not merely to click, cut, and paste. Digital technology can be of great use in carrying through this kind of learning but I would argue that the principal contribution goes the other way, towards mastering and humanizing this technology. If we need to justify such

learning's value in terms of functioning and succeeding in the new digital order, then we can look to the requirement of Jeff Bezos, the founder of Seattle's Amazon company, that his executives write and bring lengthy memoranda to their meetings that are then read and annotated collectively prior to strategic decisionmaking.

But where stand what we call the classics in this debate? What part can they play? I would candidly acknowledge that I am arguing for a return to what I would call the classical *methods* of learning rather than necessarily drawing on the classics themselves, for inspiration from the practices of Socratic method, medieval disputation, and early modern critical analysis rather than from the texts handed on from Plato, Confucius, St Augustine, and the Scottish Enlightenment. If we draw upon the latter, it should be as much for training our analytical faculties as for imbibing eternal verities. And there must be recognition of evolving sensibilities: in urging the importance of writing, for example, I am not suggesting a reversion to those nineteenth-century days when only men were allowed to teach the more subversive arts of composition with women limited to teaching the more passive, receptive skill of reading. Nor would I suggest that antiquity of itself confers virtue—for liberal education must seek to address a range of human dilemmas, those we have always faced because we are human, those that loom large today, and those we believe we can anticipate.

It is to these, and their relationship to liberal education that I now turn. For in closing, I would note—as I am sure other participants in this gathering will also be doing—that to confine ourselves to diagnosing and confronting the challenges posed by new technologies is to accept—and in effect to submit to—the narrowly mechanistic boundaries that these technologies prescribe. I have myself succumbed to this constriction. But there is of course a wider world of human consciousness and action, and one to which the technologies of the second machine age are the servant rather than the master. And here "a view from America" must focus especially on the vital role of liberal education in shaping

and maintaining the social and political order. Some years ago, in a paper subsequently published in this University's *Journal of Humanities East/West*, I argued for the importance of the classical heritage in shaping the civic culture of the United States.⁵ To an unusual, even unique, degree, Americans have constructed their sense of national identity and allegiance around a body of political institutions and a tradition of widespread participation in civic affairs. To be an American was not a matter of blood, color, class, or religious affiliation but of an ideational loyalty to accepted political procedures and principles, coupled with an obligation to active citizenship; to be designated "unamerican" was to be suspected of repudiating these habits and ideals. Groups seeking inclusion in the political nation—ethnic immigrants, non-Protestants, African-Americans, women—did so by proclaiming their wholehearted adherence to the nation's ideals and by branding their exclusion as contrary to these ideals' more perfect expression.⁶ Fundamental to this embrace of what has been called "civic republicanism" was an educated citizenry, for as our colleague Alan Wood has stated in his study of *Asian Democracy in World History*, "the greater the number of educated citizens in a polity, the higher the level of public discourse; the higher the level of public discourse, the greater the chances for the success of democracy."⁷

What nourishes such discourse? At one level, it requires some widespread knowledge of past ways, practices, and beliefs, of ways not taken as well as those that were. It requires an appreciation of other cultures, an understanding of difference, along with a set of standards for assessing their relative value. Taken together, these can afford, in Ralph Waldo Emerson's phrase, "a platform whence

5 "Reconstituting a Classical Heritage: The Civic Culture of the United States," *Journal of Humanities East/West*, no. 18 (Dec., 1999), pp. 45-59.

6 The concept of an American civic culture has been studied by, among others, Gabriel A. Almond and Sidney Verba, *The Civic Culture* (Princeton, N.J.: Princeton University Press, 1963), and, as relating to the comprehension of ethnic diversity, Lawrence H. Fuchs, *American Kaleidoscope: Race, Ethnicity, and the Civic Culture* (Hanover, N.H.: Wesleyan University Press, 1990).

7 Alan T. Wood, *Asian Democracy in World History* (New York: Routledge, 2004), p. 69.

we may command a view of our present life, a purchase by which we may move it."⁸ But above all this education must be liberal—*liber*, liberating—in the sense of cultivating the freedom and ability to form habits of enquiry, critical assessment, coherent communication, and social engagement. These qualities, I have suggested, are especially needed to survive and prosper in the brave new digitalized world, but they have a larger value for cultivating and securing the civic virtues and communities that Thomas Jefferson, drawing on the writings of Epicurus and John Locke, proclaimed in his country's constituent covenant to be America's, indeed humanity's, right to "the pursuit of happiness."

8 Ralph Waldo Emerson, "Circles," *Essays: First Series* (Boston: Houghton, Mifflin Co., 1883), p. 291.