



Globalizing the Liberal Arts: Twenty-First-Century Education

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A liberal arts education will become increasingly important in the twenty-first century because the automation economy requires more than ever that individuals develop the cognitive flexibility and the habits of mind that allow for life-long learning. The ability to learn new skills, accept new approaches, and cope with continual social change will be essential in the fourth industrial revolution (4IR). In response to the need for a twenty-first-century liberal arts education, a partnership between Yale University in New Haven, Connecticut, United States and the National University of Singapore (NUS) developed the small and selective liberal arts institution Yale-NUS College in Singapore. The establishment of Yale-NUS College, the first of its kind in Singapore, and one of the first in Asia, indicates Singapore's commitment to life-long learning and a belief that such an education is particularly valuable in the context of the automation economy. This chapter offers some historical context for the efforts of Yale and NUS to found a new liberal arts college in Asia as well as some indications of key considerations in the broader effort to globalize the liberal arts.

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I will argue that liberal arts education attempts to shape students' characters through engagement in a shared community shaped by conversations across various disciplines and points of view.

THE FOUNDING OF YALE-NUS COLLEGE

Singapore, a wealthy, mostly English-speaking, former British colony, has developed in the half century since its independence an excellent educational system, including some of the best secondary schools in the world and several excellent universities. NUS, the result of a variety of mergers of earlier educational institutions, including the King Edward VII Medical College (founded 1905) and Raffles College (founded 1928), has come to be regarded as one of the best in Asia on many measures. Although it always had some distinction in the arts and sciences generally, it was mainly known in the late twentieth century for teaching engineering, medicine, and law. These professions were the main areas in which the founders of the nation wanted to invest, and the number of places at the University in various subjects is, even today, subject to central planning by the Ministry of Education (MOE). Early in the twenty-first century, NUS determined to start a program in the liberal arts.

By the late twentieth century, NUS began to rise in the rankings of research universities, around the same time that it adopted American-style tenure and academic titles (replacing the old British titles). In the first decade of the twenty-first century, the Singaporean government decided to grant its universities autonomy. In practice, the Ministry still exercises considerable control since (as in many Commonwealth countries) a large majority of the universities' budget comes from the government. But the universities have independent governing boards and can develop their own priorities, and they can raise private funds to support those priorities. In fact, the government provides generous matching funds and tax advantages to encourage private philanthropy. At the graduate and executive education level, Singaporean universities can also attract foreign students, but at the undergraduate level, the number of foreign students is capped at between 10% and 15%. This makes more places available for Singaporeans but limits the ability of the universities to become international leaders in undergraduate education. Bringing in international students diversifies the learning experience and helps build a community through conversations, fostering skill at cross-cultural communication.

Over the decade-plus since the universities were granted autonomy, NUS has been notable for its entrepreneurial attitude, forming the Yong

Siew Toh Conservatory in partnership with the Peabody Conservatory at Johns Hopkins, the Duke-NUS Medical School in partnership with Duke, the University Town residential campus, and many other impressive programs. The past President of NUS, Tan Chorh Chuan, one of the most impressive academic leaders of our time, fostered this entrepreneurial spirit. His great personal modesty did not disguise the high ambitions he held for his university. Under his leadership NUS set on a course to broaden the learning in higher education beyond information transfer. For example, the career office became the Centre for Future Ready Graduates, and the Institute for Application of Learning Science and Educational Technology was established to offer a course for all students on “learning to learn.”¹

The founding of Yale-NUS College resulted from what seems to be a typically Singaporean investment of energy and funds in a bright idea proposed by an international panel of advisors to the government. The International Academic Advisory Panel of the Ministry of Education, chaired by future Singapore President (and former NUS Vice-Chancellor) Tony Tan, recommended in January 2007 that Singapore consider founding a small private liberal arts college. In October 2007, a delegation, headed by Minister of State for Education Rear Admiral Lui Tuck Yew, visited nine small colleges in the United States, plus Northeastern University and Yale University. During the course of discussion, it was decided that rather than an independent college, the liberal arts college should form part of one of the existing universities. The then NUS Provost (now NUS President), Tan Eng Chye, presented a proposal for a liberal arts college within NUS to an MOE working group in March 2008. The university felt that such a college would have greater opportunity for success within a strong existing institution. Later that year, the proposal received approval in principle.

The proposal for a collaboration between Yale and the NUS first arose in a conversation between Tan Chorh Chuan, then President of NUS, and Rick Levin, then President of Yale, at the World Economic Forum in Davos, Switzerland in 2009. President Tan was looking for a US partner with expertise in undergraduate education. A year later, as chair of the humanities committee for the new college, I learned that many Asian universities had begun investing in a more integrative type of education, using

¹“Education,” NUS Institute for Application of Learning Science and Educational Technology, accessed January 10, 2018, <http://nus.edu.sg/alset/education.html>.

small classes and active learning, modeled on American liberal arts education. In November of 2017, the launch conference of the Association of Asian Liberal Arts Universities, at Lingnan University in Hong Kong, demonstrated this in full force, as dozens of institutions were represented, and 14 joined the association. Presidents Tan and Levin planned Yale-NUS College to be a pioneer of this type of education, and one of its central goals was to “foster the habits of mind and character needed for leadership in all sectors of society.”² In this way, Singapore’s MOE, and NUS, demonstrated a clear commitment to fostering habits of life-long learning in undergraduate education.

CHARACTER

The idea of a liberal education emerges from ancient times, when it described the kind of education appropriate for a free citizen, which is to say that it excluded slaves, foreigners, women, and in fact anyone who had to work for a living. We continue to work on the access to such an education today, but the liberal arts are closely aligned with freedom—the autonomy to pursue intellectual questions, the freedom to debate issues of common concern, freedoms that prepare a young person for full citizenship—even though the boundaries of that freedom have long been contested. The ancient world contrasted the liberal arts with the servile arts, that is, what we would call today vocational education. In Latin, the word “arts” refers to both the arts and sciences, and the middle ages recognized seven liberal arts: grammar, rhetoric, logic, geometry, arithmetic, music, and astronomy. Today a liberal arts education spans the arts, humanities, and social and natural sciences. When people talk about a liberal arts education, they are generally referring to undergraduate education that stresses broad study of the arts and sciences rather than pre-professional training in such subjects as business, law, medicine, or engineering. They also emphasize a collegiate form of education, in which students and faculty pursue many disciplines together in the context of a shared community, a theme addressed in the next section.

Citizenship is the most commonly cited reason to pursue a liberal education, and it is a very important one. By developing their critical reasoning skills, and by practicing the arts of discussion, collaboration, and compro-

²“Yale-NUS College Faculty Handbook,” Yale-NUS College, last modified October 2016, https://faculty.yale-nus.edu.sg/wp-content/uploads/sites/12/2016/10/Yale-NUS_College_Faculty_Handbook-updated_Oct_2016.pdf.

mise both inside and outside the classroom, students should become better able to debate matters of public importance and to arrive at a reasoned agreement, or reasoned disagreement, with their peers in the political or civic sphere. There are at least four other good reasons to pursue a liberal education and to provide one for our young people.³ A second reason, also valid and perhaps more significant to some parents and governments, is to shape more innovative contributors to the economy and society. This is an issue particularly important to Singapore's economic and social development. Technical education is extremely important for the development of industrial society, but in the post-industrial world, employers value softer skills such as creativity, the ability to think outside the box, and openness to multiple perspectives. Liberal education fosters these traits, and this is why liberally educated students have opportunities to join the ranks of the global elite. These skills will arguably become all the more important as artificial intelligence replaces human workers in many technical fields.

Third, certain forms of liberal education also prepare students well for life in a multicultural or cosmopolitan society by making them aware of a variety of cultures and the need to communicate effectively across cultural differences. This is done through a living and learning environment in which students must learn to engage respectfully with ideas that make them uncomfortable or with which they are unfamiliar. They learn to evaluate new ideas with evidence, and formulate opinions, not make assumptions. Fourth, and more fundamental than any of these, perhaps, is the ethical case for liberal education, the case for character. Socrates said that "the unexamined life is not worth living...."⁴ Liberal education makes us aware of the importance of examining our own prejudices and assumptions by fostering habits of self-awareness and self-criticism. Finally, and most intangibly, liberal education allows the individual a greater enjoyment of life, whether it is in appreciating a work of art, understanding an argument in philosophy or an equation in mathematics, or exploring the diversity of the natural world.

³The list here is influenced by but not identical with that of Andrew Delbanco, *College: What It Was, Is and Should Be* (Princeton: Princeton University Press, 2014). See also my article, Pericles Lewis, "In Asia, for the World: Liberal Education and Innovation," in *Experiences in Liberal Arts and Science Education from America, Europe, and Asia: A Dialogue Across Continents*, eds. William Kirby and Marijk van der Wende (London: Palgrave, 2016), 47–60.

⁴Plato, *Five Dialogues: Euthyphro, Apology, Crito, Meno, Phaedo* (Indianapolis: Hackett Publishing, 2002), 41.

The second President of the United States, John Adams, was perhaps not the most democratic of the founding fathers, and his reputation is tainted by his enactment of the Alien and Sedition Acts of 1798. Nonetheless, his opposition to slavery, his dedication to a republican form of government—a “government of laws, and not of men”⁵—and his relationship with his remarkable wife Abigail Adams are among the reasons for his enduring appeal, which has only increased in recent decades.⁶ A Harvard graduate from a modest background, Adams had a particular view of the role of liberal arts education in developing citizens for the new republic. During the debates about the US Constitution in the 1780s, he wrote that

By gentlemen are not meant the rich or the poor, the high-born or the low-born, the industrious or the idle: but all those who have received a liberal education, an ordinary degree of erudition in liberal arts and sciences. Whether by birth they be descended from magistrates and officers of government, or from husbandmen, merchants, mechanics, or laborers, or whether they be rich or poor.⁷

In other words, Adams thought that there were certain virtues associated with being a gentleman regardless of a person’s background, and that an education in the liberal arts and sciences was the prerequisite for being a gentleman in this sense. At least since the time of John Adams, one of the goals of liberal education has been cultivating character and citizenship. In Adams’ time, those who received a liberal education were by definition part of a small elite, but in the nineteenth and twentieth centuries access to undergraduate education expanded rapidly. For example, Mount Holyoke was established as a liberal arts college for women in 1837, followed by several others during and after the Civil War. (Yale admitted women to graduate programs in 1869, but the college remained all-male until 1969.) This trend not only developed in America, but also in Asia,

⁵ “Massachusetts Constitution,” Commonwealth of Massachusetts, accessed January 10, 2018, <https://malegislature.gov/Laws/Constitution>.

⁶ A phrase from the seventeenth-century political theorist James Harrington that Adams influentially quoted in the years leading up to the American Revolution.

⁷ John Adams, *Defence of the Constitutions of Government of the United States* (Boston: Edmund Freeman, 1787). See also Gordon S. Wood, *Empire for Liberty: A History of the Early Republic, 1789–1815* (Oxford: Oxford University Press, 2009), 24. Adams’ argument here was not entirely democratic: he favored a bicameral legislature in which the upper house (Senate) would represent only the educated portion of society.

for example with the establishment of the precursor to Doshisha Women's College of the Liberal Arts in 1876 in Kyoto, Japan. But early streaming regardless of more inclusive policies has remained the norm in many parts of the world. Ideally, all citizens would receive some kind of education in the liberal arts and sciences. Although American high schools have a mixed record, they do in fact pursue a broadly academic curriculum for most students and avoid the early streaming of some students into purely vocational tracks that is common in Europe and Asia.

This chapter draws on Adams' understanding of the liberal arts. Rather than argue against technical education, it is notable that liberal arts education could be strengthened by adding more of a technical dimension. At the same time, education in fields like engineering and medicine can benefit from an element of liberal education, touching on communication, ethics, and the social dimension of these technical fields. Indeed, this is particularly true in the context of the fourth industrial revolution where we are reaching new moral and ethical boundaries of what it means to be human, for example in the case of biosynthetic and artificial intelligence. Rather, here the argument is for a broad education that prepares students to lead a responsible life in this century—one that readies them for the responsibilities and privileges of freedom. An education in the arts and sciences should shape young people, regardless of their background, for life in a modern democracy. It should also help them develop character.⁸

Critics of the liberal arts come in two main types, that I would call pragmatic and ideological. Those who see themselves as pragmatists think that universities should take a more vocational approach to teaching young adults and provide them with specific skills relevant to the job market, often with a focus on science and technology. Even the 44th President of the United States, Barack Obama, whose eloquence and learning reflect the wonderful liberal arts education he pursued at Occidental College and Columbia University, offered a version of this criticism when he said that “folks can make a lot more potentially with skilled manufacturing or the

⁸For discussions of character in education, see Paul Tough, *How Children Succeed: Grit, Curiosity, and the Hidden Power of Character* (New York: Houghton Mifflin, 2012); Emily Bazelon, *Sticks and Stones: Defeating the Culture of Bullying and Rediscovering the Power of Character and Empathy* (New York: Random House, 2013); and William Deresiewicz, *Excellent Sheep: The Miseducation of the American Elite and the Way to a Meaningful Life* (New York: Free Press, 2014). On character in general, see David Brooks, *The Road to Character* (New York: Random House, 2015).

trades than they might with an art history degree”⁹ (a comment for which he later apologized). Sometimes this critique is the result of a misunderstanding of the meaning of “arts”—in fact, a liberal arts education can and often does include scientific and technical education. The important question about breadth or general education is whether a broader, more interdisciplinary education really prepares students better for life. I believe that it does, and I will explain why in the third section of this chapter.

A more fundamental, ideological critique of liberal arts education takes aim at its aristocratic pedigree and sees the liberal arts as a training ground for effete elitists. The opposition results in part from a decade-plus of unequal economic growth and the sense that recent gains have gone primarily to international elites. The stagnation faced by many has also become entwined with nationalistic attitudes and resentment of perceived outsiders; people with legitimate economic and social concerns have become prey to demagogues who promise easy solutions based on an imagined simpler past. Those of us in the academy have more occasion than ever to inquire whether the kind of education we offer our students really prepares them for lives as active citizens or whether it only makes them ready for participation in a global elite typified by the consulting firms and investment banks that hire so many of our graduates. Liberal arts education should, I think, prepare students not just for success in the economy but also for democratic citizenship.¹⁰

ASIA AND THE LIBERAL ARTS

Many Asian educators and planners have felt for some time that the highly technical education they provide in their universities may have been better geared to an earlier stage of economic development. When Singapore was just beginning to industrialize, a certain number of engineers, doctors, and other professionals were required, and the government planned enrollments in the NUS accordingly. Now that Singapore is one of the wealthiest countries in the world, however, the aspirations of its citizens are more complex, and the economy has become more diverse. In this

⁹ “Remarks by the President on Opportunity for All and Skills for America’s Workers,” The White House, last modified January 30, 2014, <https://obamawhitehouse.archives.gov/the-press-office/2014/01/30/remarks-president-opportunity-all-and-skills-americas-workers>.

¹⁰ See my article, Pericles Lewis, “A Challenging Time for Cosmopolitan Education,” *Times Higher Education*, February 2, 2017.

environment, preparing students for a single job for life no longer makes sense. Singaporean policymakers have come to recognize the importance of soft skills (some of the same noncognitive traits we often call character) and flexibility, while Singaporean students have sought a broader range of post-secondary educational opportunities. The increasing wealth of Singapore has also made the brain drain a reality, as more middle- and upper-middle-class families can afford to send their children to the United States, Britain, and Australia for undergraduate studies. Many of them do not return home to Singapore.

Throughout Asia in the early part of the twenty-first century, governments and private philanthropists were founding new institutions on the liberal arts model (some are listed below). They worried that the United States, despite its 15-year-olds' limitations in test-taking, had produced greater innovation than Asian societies.¹¹ Many advocates of liberal education believe that it is the American post-secondary education system (rather than, say, corporate governance, tax structures, or immigration policy) that accounts for the success of our brands and especially our technology companies. Shortly before his death in 2011, Apple founder Steve Jobs had said "It is in Apple's DNA that technology alone is not enough. It [is] technology married with Liberal Arts, married with the Humanities, that yields us the results that make our heart sing."¹² Asian educators saw that while their students had excelled in cognitive tests and in exams at the end of high school, their universities failed to encourage innovation and lacked some of the opportunities of the American higher education system. To some extent, as the quotation from Jobs suggests, these opportunities are curricular, but more fundamental than the curriculum was the effort to foster character, to allow students to develop more holistically. Jobs understood, as other entrepreneurs do, that to thrive in the fourth industrial revolution, you need to be able to learn new things, constantly, and to draw connections between apparently disparate areas of endeavor.

¹¹ Richard C. Levin, "Top of the Class: The Rise of Asia's Universities," *Foreign Affairs* 89, no. 3 (May/June 2010).

¹² Quoted in Anthony Woodcock, "The Death of Liberal Arts? Or the Reunion of Broken Parts," *Huffington Post*, April 25, 2015. For further consideration of the liberal arts and the fourth industrial revolution, see Daniel Araya and Creig Lamb, "Surfing the 4th Industrial Revolution: Artificial Intelligence and the Liberal Arts," *Brown Center Chalkboard*, April 11, 2017, <https://www.brookings.edu/blog/brown-center-chalkboard/2017/04/11/surfing-the-4th-industrial-revolution-artificial-intelligence-and-the-liberal-arts/>.

The mission statements of the new Asian programs show this combination of an idealism about character education and faith in the American liberal arts model. Yuanpei College, founded in 2001, at Peking University (one of the leading universities in China, founded in 1898) proclaims an “emphasis on fundamental studies, practical capability and personal character.”¹³ The School of International Liberal Studies (2004) at Waseda University in Tokyo (1882) aims to nurture “truly global citizens motivated to act on the world stage by a sense of justice, competitiveness, and humanity.”¹⁴ The College of Liberal Studies (2009) at Seoul National University (1946) hopes “to achieve its aim of cultivating dedicated and competent leaders of the global community ... through giving students the freedom to choose [their course of study].”¹⁵ Ashoka University, outside Delhi, newly founded in 2011, wants “to help students become well-rounded individuals who can think critically about issues from multiple perspectives, communicate effectively and become leaders with a commitment to public service.”¹⁶ Although the similar rhetoric of so many university and college websites can induce a certain amount of cynicism, in fact the widespread efforts of these and many other new programs in Asia point to a desire on the part of universities to move beyond simple success on tests. They also respond to demand: Asian students thirst for an education that will address their desires for justice, service, and self-expression. They also want to develop the noncognitive skills that will allow them to be successful in a globally competitive job market—a job market, that for Asia, is likely to be automated sooner than in other parts of the world.

The secondary education system in Singapore is generally judged to be one of the best in the world, and Singaporean students score near the top internationally in tests like the Programme for International Student Assessment (PISA), which tests 15-year-olds’ achievements in reading, math, and science, and in the British A-levels and the International

¹³Quoted in Chang Chenguang, “Introducing English-Language Liberal Education in China,” in *International Teaching and Learning at Universities*, eds. Gordon Slethaug and Jane Vinther (New York: Palgrave Macmillan, 2015), 38.

¹⁴“School of International Liberal Studies,” Waseda University, accessed January 10, 2018, <https://www.waseda.jp/fire/sils/en/about/overview/>.

¹⁵“Seoul National University College of Liberal Studies,” Yale-NUS College, accessed January 10, 2018, <http://international-liberal-arts.common.yale-nus.edu.sg/east-asian-liberal-arts-institutions/seoul-national-university-college-of-liberal-studies/>.

¹⁶“About Ashoka University,” Ashoka University, accessed January 10, 2018, <https://www.ashoka.edu.in/pages/about-us-69>.

Baccalaureate (IB). But Singaporeans have been aware for some time that success on tests does not necessarily translate directly either into good employment opportunities or for that matter into happiness. The high schools have gradually moved away from rote memorization and test prep and toward more active learning approaches. In his 2012 National Day Message, the Prime Minister, Lee Hsien Loong, argued for a more holistic form of education: “Let us prepare every child for the test of life, not just a life of tests.”¹⁷ This has been further fostered not just by the development of Yale-NUS College, but also by investments in life-long learning through such programs as FutureSkills Singapore and SingaporeInnovate.

Some writers on education argue that schools, colleges, and universities have given up on the goal of shaping their students’ characters.¹⁸ In a society with many competing views about virtue, and one where students and their parents are often seen as clients or customers, it is easier for educational institutions to remain neutral about anything that touches on values and to demand less from their students. The right tends to blame educational institutions for being too permissive and not, for example, guiding students on proper sexual mores. The left blames those same institutions for transmitting the values of a dominant society that it views as inegalitarian or even oppressive. Critics on the right would have the university speak more explicitly about moral values. Critics on the left would have us more explicitly question the social and political values of the dominant society. In this context, even talking about character can seem prudish or quaintly Victorian.

And yet, educators want to transmit values to the next generation. The values to be transmitted vary greatly. Some may want to teach rigorous scientific method; others a particular set of theories about society or notions of justice; still others a set of esthetic responses to the world. But in all these cases the underlying concern is to shape students’ characters, to make them in a broad sense better people. Educators understand that the desire for knowledge, curiosity, is central to the development of character. It is not just the old injunction, know thyself, that was engraved on the entrance to Apollo’s Temple at Delphi. It is also a matter of knowing

¹⁷“Prime Minister’s National Day Message: Full Speech,” *The Straits Times*, August 8, 2012, <http://www.straitstimes.com/singapore/prime-ministers-national-day-message-full-speech>.

¹⁸Deresiewicz, *Excellent Sheep*; Harry Lewis, *Excellence Without a Soul: Does Liberal Education Have a Future?* (New York: PublicAffairs, 2007).

the world—that curiosity about the world helps us to understand how we relate to what is on the next block or the other side of the planet and thereby also helps us to understand how we relate to other individuals and other cultures. In the pursuit of knowledge about the world we also come to know ourselves better.

The Chinese refer to liberal education as “whole-person education.” It is recorded in the *Analects of Confucius* that “The Master said: The gentleman [junzi] is not a vessel [qi],” where Chin Annping explains that “a gentleman, junzi (君子), is broad of spirit and intellectually agile; he can take on different problems and apply himself to many situations and so is not a vessel, a qi (器), for a specific use.”¹⁹ One source for the recent surge of interest in liberal education is the sense that the relatively narrow, technical education that has predominated in Asian universities does not prepare students well for the complexity of the modern world and economy. But a deeper source of concern is the sense that mere technical education does not help students develop character, does not shape gentlemen in Confucius’ sense. Some of the liberal education movements have aimed to inculcate Confucian values, as perceived by modern Asian governments, and (at least in their interpretations) such values in fact strongly contrast with modern Western liberal values. But the most promising experiments, not only in Singapore but also in China, Hong Kong, and South Korea, expose students to a variety of both Asian and Western ideas about character and allow the students to form their own judgments, whether they be gentlemen or ladies.

In all character education, the teacher’s role as an example is essential. Mencius, the most famous follower of Confucius, said in the fourth century BCE

A gentleman teaches in five ways: the first is by a transforming influence like that of timely rain. The second is by helping the student to realize his virtue to the full. The third is by helping him to develop his talent. The fourth is by answering his questions. And the fifth is by setting an example others not in contact with him can emulate. These five are the ways in which a gentleman teaches.²⁰

¹⁹Confucius, *The Analects*, trans. Chin Annping (New York: Penguin Books, 2014), 17–18.

²⁰D. C. Lau, *Mencius* (Hong Kong: Chinese University Press, 1979), 2: 283.

A Chinese liberal arts professor once told me his goal was to train people to be noble or better persons. We may all disagree on what constitutes nobility or what it means to be a gentleman or lady or even a good person. Some of us may doubt whether it is possible to have much influence on people's characters by the time they get to university. But I think that anyone who decides to become a teacher would agree that, underlying the subject matter, methodological debates, or political ideologies, the ultimate goal of education is to make young people better. Ideally, we can help them learn to shape their own characters to the point where, at least within the limits of circumstance, they can also choose their own fates, and have the habits of mind to adjust their knowledge to the societal context.

COMMUNITY

While schools, colleges, and universities help to form their students' character, they do not do so through a simple exchange between an individual teacher and a single student. They shape their students through their engagement in a community. The philosopher John Dewey, the leading influence on progressive education in the United States, wrote that "the school is primarily a social institution ... [and that] the child should be stimulated and controlled in his work through the life of the community."²¹ Colleges, in particular the residential colleges typical of American higher education, provide a special kind of community that students inhabit for four years of transition between adolescence and adulthood. American educators have used the term a "community of learning" to describe the function of such colleges, which ultimately derive their form and often their architecture from the cloistered monasteries of medieval Europe, and they often maintain the air of the cloister for better and for worse.

The first residential colleges were constructed at Oxford in the thirteenth century for students at the university there. The essential character of college life is the attention we pay to the needs of a group of friends and classmates who learn together and who teach one another.²² This living and learning environment enables what social scientists call the peer effect.

²¹ John Dewey, "My Pedagogic Creed," in *The Continuing Debate: Essays on Education*, eds. Leslie A. Fiedler and Jacob Vinocur (New York: St. Martin's 1964), 172, 174. Dewey did not make a strong distinction between society and community.

²² "Groundbreaking Ceremony of Yale-NUS College: A Community of Learning," Yale-NUS College, July 6, 2012, <https://www.yale-nus.edu.sg/newsroom/groundbreaking-ceremony-of-yale-nus-college/>.

It is something professors sometimes neglect to acknowledge, namely that students can—in the right environment—learn as much from their interactions with each other in student societies and team sports, and from intense late-night conversations, as they do from their formal course work. While the American collegiate model traces its roots to medieval Oxford and Cambridge, similar communities of learning existed in China and India even earlier. At the Temple of Confucius in Beijing, built in 1302, the 13 Confucian classics are inscribed on steles and the names of the scholars who scored highest in the imperial exams are preserved on stone tablets.²³

Many committed educators see a split in the purpose of college arising out of the growth of the research university in the late nineteenth century, a point made with great subtlety by Andrew DelBanco in his book *College*.²⁴ The Ivy League colleges all began life before the American Revolution as undergraduate-only institutions, and in fact students often enrolled at the age of 15 or 16. It was only with the rise of science and social science and the importation of graduate education, mostly on a German model, that these colleges became universities, in a sense adding a whole research apparatus on top of their traditional undergraduate programs—and transforming those programs in the process. Dartmouth, in fact, still calls itself a college, and the other Ivy League universities became more or less research-intensive, with Harvard perhaps the most tilted toward graduate and professional education while others like Princeton and Brown remained relatively more focused on undergraduates in the United States.

Around the same time, in the late nineteenth century, new universities like Johns Hopkins (1876), the University of Chicago (1890), and Stanford (1891) were founded on the research-intensive model. Meanwhile, hundreds of small colleges, often founded by religious denominations, maintained their focus on liberal arts education for undergraduates only. In general, the older colleges and those located in wealthy cities (which, in the nineteenth century, included New Haven, Connecticut) tended to grow into universities, while those in more out-of-the-way

²³ On the history of Chinese higher education, see T. H. C. Lee, *Education in Traditional China: A History* (Boston: Brill, 2000).

²⁴ Delbanco's book tells something of the history of American liberal arts colleges, including Harvard, Yale, and Columbia, in the pre-revolutionary era. See also Bryan Garsten et al., *Yale-NUS College: A New Community of Learning* (New Haven: Yale University, 2013).

places or with somewhat shorter histories remained liberal arts colleges. Many of the large universities, however, maintained a strong emphasis on undergraduate education.

An early encounter between the liberal arts tradition and modernity resulted in one of the most influential educational documents of the nineteenth century, the Yale Reports of 1828. Other colleges, notably Amherst, were considering dropping the requirement for Latin and Greek, and the Yale trustees asked a faculty group, led by President Jeremiah Day, to consider reforms to the curriculum. The first section of the resulting report, written by President Day himself, offers a strong defense of liberal education, mostly along traditional lines but with important innovations. What seems to have been relatively innovative, and become a standard part of most subsequent defenses of liberal education, was Day's emphasis on teaching students "how to learn."²⁵ In particular, Day argued in what became a famous passage that

The two great points to be gained in intellectual culture, are the discipline and the furniture of the mind; expanding its powers, and storing it with knowledge. The former of these is, perhaps, the more important of the two ... Those branches of study should be prescribed, and those modes of instruction adopted, which are best calculated to teach the art of fixing the attention, directing the train of thought, analyzing a subject proposed for investigation; following, with accurate discrimination, the course of argument; balancing nicely the evidence presented to the judgment; awakening, elevating, and controlling the imagination; arranging, with skill, the treasures which memory gathers; rousing and guiding the powers of genius.²⁶

What was distinctive about the Yale Reports was the emphasis not on the teaching of traditional subject matter (although the second part of the document does defend classics) but on the development of the student's mental powers, "the resources of his own mind."²⁷ The reports in fact used most of the arguments in favor of liberal education that educators do today—the political (citizenship), economic, cultural, ethical, and esthetic—and, as the historian Jack Lane has shown, they do so in service of a relatively modern, liberal capitalist notion of the autonomous

²⁵ Yale University, *Reports on the Course of Instruction in Yale College: By a Committee of the Corporation and the Academical Faculty* (New Haven: Hezekiah Howe, 1828), 14.

²⁶ Yale University, *Reports on the Course of Instruction in Yale College*, 7.

²⁷ Yale University, *Reports on the Course of Instruction in Yale College*, 8.

individual who contributes to society through his economic activities as much as through politics or religion.²⁸ Lane notes that the report nowhere uses the word *virtue*, a more traditional and morally loaded term for education²⁹; it does, however, frequently emphasize *character*, with its implications of self-reliance and entrepreneurship, appropriate for the rapidly expanding American economy. Day emphasizes also that all social classes should have a liberal education, given “[o]ur republican form of government.”³⁰ Despite their curricular conservatism, the Yale Reports took a clearly progressive political view in their justification of the curriculum. The Yale Reports had a major influence on the curriculum in many of the 80 or so colleges founded in the United States in the first half of the nineteenth century, a significant number of which were led by Yale graduates or former Yale faculty.

In the later nineteenth century, as the research ideal gained ascendancy, Harvard President Charles William Eliot moved his university away from the common curriculum and introduced the elective system for undergraduates. Eliot argued in his inaugural address of 1869 that “the young man of nineteen or twenty ought to know what he likes best and is most fit for.”³¹ The rise of the elective system was part and parcel of the transformation of liberal arts colleges into research universities, as both professors and students became more specialized. It may also have reflected a new idea of young adulthood as many of Eliot’s students had fought in the war and the average age and maturity of undergraduates rose notably. Beginning in the late nineteenth century, most American universities allowed students to choose most of their own courses and required them to specialize in one major subject, while often creating distributional requirements that required them to study at least some subjects outside their own major field. Eventually Yale too dropped the Latin and Greek requirements and started to allow students to choose most of their own courses and to major in a specific discipline. Training in a major (or concentration at Harvard) resembled preparation for a PhD more than it did the old unified curriculum of the early nineteenth century. This breaking up of the old systems of knowledge and replacement of traditional subjects

²⁸ Jack C. Lane, “The Yale Report of 1828 and Liberal Education: A Neorepublican Manifesto,” *History of Education Quarterly* 27, no.3 (1987): 337.

²⁹ Lane, “The Yale Report of 1828 and Liberal Education,” 334.

³⁰ Yale University, *Reports on the Course of Instruction in Yale College*, 29.

³¹ Elliot, *Addresses at the Inauguration of Charles William Elliot as President of Harvard College, Tuesday, October 19, 1869* (Cambridge: Server and Francis, 1869), 39–40.

by modern, late nineteenth-century ones reflected the impressive growth of science and the social sciences as well as a more fundamental change in the attitude to the purposes of undergraduate education, with an increased emphasis on specialization.

Residential colleges continue the work of liberal education beyond the classroom, promoting compromise over unilateral decision-making and a recognition of others' humanity and worth over the primacy of a single student's individual needs. Students learn to become leaders among their peers, but also learn to listen to what their peers have to say, forging and evaluating solutions together. Particularly in today's multicultural society, by living alongside peers with a variety of different backgrounds, experiences, and interests, students learn to coexist with others, even in situations where their opinions or expectations may differ widely from one another.³² As the connectedness of the social media and the internet of things brings us all closer together, these skills increase in value.

CONVERSATION

Ultimately the challenge of designing a curriculum for a cosmopolitan and multicultural college relates to the problem of meaning in a secular age. In his early twentieth-century lecture on "Science as a Vocation,"³³ the sociologist Max Weber quotes the novelist Leo Tolstoy to the effect that the essential question for all of us is "what shall we do and how shall we live?"³⁴ Weber argued that the modern age is one of disenchantment, in which we no longer believe that the world itself has an essential meaning.³⁵ For Weber, this also led to a somewhat pessimistic assessment of the possibilities for education. Since science, and learning more generally, is continually expanding, it is impossible for any one of us to command more than an infinitesimal fraction of all the knowledge that is out there in the world. Furthermore, whatever scientific discoveries we make today are destined to be surpassed in just a few years. For Weber, this meant that modern life lacked the sense of meaning that life in a more traditional

³² On the importance of avoiding self-segregation in university accommodation, see Lewis, *Excellence without a Soul*, 79.

³³ Max Weber, "Science as a Vocation," in *Max Weber's Complete Writings on Academic and Political Vocations*, trans. Gordon Wells, eds. John Dreijmanis (New York: Algora Publishing, 2007), 25–52.

³⁴ Max Weber, "Science as a Vocation," 39.

³⁵ Weber, "Science as a Vocation."

society, whose mores and intellectual presuppositions were not constantly changing, could supply. Weber recognized, however, that even while scholarship could not necessarily solve the problem of how to live, the scholar as teacher did have a responsibility to his or her students. That duty, the college teacher's duty, is not to tell students what they should do with their lives, how they should live, but it is to confront students with what Weber called "inconvenient facts,"³⁶ that is, facts that may challenge their preconceived opinions. This is not to say that we should only present the facts that support our own opinions—far from it, if we are doing our job right we will also present facts that challenge what we ourselves hold dear. Weber summarizes the task of the educator as follows: "we can force the individual, or at least we can help the individual, to give himself an account of the ultimate meaning of his own conduct."³⁷ In other words, our task is to require students to clarify their own answers to the questions "what shall we do and how shall we live?" We cannot answer the questions for our students, but we can ask young people to confront them. As artificial intelligence replaces humans in many jobs, what livelihoods will be human? These questions are essential for civic leaders to ponder and respond to as the way we live and work is altered. In this way, a liberal arts education prepares communities for the adjustments ahead.

The goal at Yale-NUS College was to create a more integrative type of curriculum that would truly prepare students for an engaged and intellectually enriching life. I phrased the challenge of the Yale-NUS curriculum in terms of a central question: What must a young person learn in order to lead a responsible life in this century? The story of how the Yale-NUS curriculum developed is essentially a conversation about conversations, and I believe it has some value for thinking about how we educate young people to be open-minded participants in the conversations of today and even to enter into conversation with the great traditions of the past. These are the kinds of conversation that Plato and his friends held in the academy, the grove of olive trees in Athens that gives its name to modern academia. The great painting by Raphael, *The School of Athens*, in the Vatican, imagines the thinkers of many centuries in a conversation, with Plato and his student Aristotle at the center. This was the kind of conversation we wanted our students from all over the world to participate in, but what would an Athenian-style education look like today?

³⁶ Weber, "Science as a Vocation," 43.

³⁷ Weber, "Science as a Vocation," 48.

Since classical times in the West, as I mentioned above, a liberal education has been understood to mean the type of learning appropriate for a free citizen. In the ancient world, these citizens were exclusively male and often held slaves; even Athenian democracy was hardly democratic by modern standards. Nonetheless, over time, and notably in the early days of the American republic, liberal arts also became part of an education for democratic citizenship, and even earlier education has generally had an element of meritocracy or democracy about it, insofar as it allowed the most talented to rise regardless of rank and connections. This was the motivation behind the great Asian examination systems, and in fact Asia had its own forms of liberal arts education. The seven liberal arts of medieval Europe comprised the trivium (grammar, logic, and rhetoric) and the quadrivium (arithmetic, geometry, music, and astronomy), while in China, from the time of Confucius onward, the six arts that defined a gentleman were rites, music, archery, charioteering, calligraphy, and mathematics. There is considerable overlap here with the West, although the Chinese seem to have prized military accomplishments more highly. In both Asia and the West, what we today think of as sciences were part of the liberal arts from the beginning.

The plan for the curriculum at Yale-NUS College was to draw on the great traditions of both Asia and the West, and to establish a conversation among them. Our ideal of forming a well-rounded person capable of taking on challenges from multiple perspectives would be recognizable to educators of earlier generations in China as well as Greece. Nonetheless, these traditions have been very broadly transformed by the forces known as modernity. This is another word for the same set of forces that Weber described as responsible for the “disenchantment of the world.”³⁸ Modernity means that rather than living in organic face-to-face communities we live in larger, more impersonal societies. It also undermines our consensus about what kind of character should be admired. These forces also mean that there is less consensus than there once was about the curriculum or what the curriculum really represents, the knowledge every educated person must have.

One of the most telling criticisms of the liberal education provided at American colleges and universities ever since the development of the elective system has been that it caters to student desires or fads and does not demand enough of them. There is some truth to this complaint, although much

³⁸Weber, “Science as a Vocation,” 35.

depends on the attitude of the students, since the elective system allows them so much leeway. The former Dean of Harvard College (from 1995 to 2003), Harry Lewis (no relation), argues that systems based on distribution requirements provide “the easy way out of the imperative for general education ... for both students and faculty [since] professors can teach from their home bases and yet take credit for contributing to the breadth of undergraduate education [while students can] treat curricular requirements as the rules of a game they are challenged to win, seeking out the easiest course in each division.”³⁹ As a result, such relatively weak general education requirements, and an obsession with grades, may undermine some of the purposes of liberal education and may also exacerbate the divide between the humanities and the sciences, as students from one division try to get away with the least possible work in the other.

In the end, the new Yale-NUS faculty created a comprehensive curriculum based on conversations between Asia and the West, which has been one of the hallmarks of the college and broadly popular among students and applicants.⁴⁰ One of the main goals was to bridge the gap between the sciences and the social sciences, to bring STEM into the fold to make it STEAM. Given the diversity of preparation of our students and the cumulative nature of scientific subjects, designing a common course in science was a particular challenge. We decided to focus on the process of scientific inquiry—how are scientific theories developed and proved, what evidence counts, and how have these standards developed over time. The first few times we taught the science courses we experienced the challenge, more forcefully than in other fields, of trying to teach a broad approach to the nature of scientific knowledge when the knowledge base was quite uneven. In other words, it would be easier to teach the scientific discipline of the mind if all the students had the same scientific furniture. After reviewing the entire common curriculum in the college’s third year of operation, we came up with an approach that emphasized one big question in each semester of the scientific inquiry course. One semester would approach the question *how do we know that the theory of evolution is true and accounts for the development of the human species?* The other would ask *how do we know that climate change is happening and how do we predict its impact?* These broad questions, while taking in many questions of basic science and the history and philosophy of science, also lend themselves to exploring

³⁹ Lewis, *Excellence Without a Soul*, 50.

⁴⁰ Garsten et al., *Yale-NUS College*.

current, cutting-edge techniques. They also have obvious social importance and inherent significance.

There are legitimate questions about whether a core or common curriculum is the best form of liberal education, as against the elective systems more common in American colleges and universities. I think it is the right approach at Yale-NUS because it creates unity of experience among a very diverse group of 250 students per year from over 40 different countries and because, being very selective, we can count on students' ability to manage the challenges of the common curriculum. As such, the diversity, the small class size (capped at 18 students), and the selectivity make this approach feasible. It also helps that we do not assign recorded grades in the first semester so students have some time to adjust to the rigors of college, developing skills in how to learn, rather than how to earn an A.

Our common curriculum is our answer to the question of what a young person must learn—for this time and place—and we recognize that the answer in a different college might be different. But more importantly, we expect that our students will specialize—we just want them to specialize a year or two later than they do elsewhere. Specifically, we are trying to reset the balance between the disciplines that were mostly founded in the nineteenth century and that are the central organizing principle of most modern research universities, and the broad learning that we think, even today, will form the best basis for a student's future encounters with the world. The original designers created 14 majors across three divisions, sciences, social sciences, and humanities. The faculty members who support these major programs can speak to a vast breadth of literature, history, and quantitative reasoning. In this way, they model the character and citizenship the college intends to foster in our students.

In the end, the argument for a common curriculum is closely linked to the notion of college as a community of learning. Clearly there are some things a young person must learn, and just as clearly not all those things are taught in high school. In a global college like Yale-NUS in Singapore, but even in a diverse community like the United States, despite the efforts to achieve a common core in high school, students come to college with very different levels and types of preparation, and ideally a common curriculum will allow us to ensure that they graduate with some of the essential skills and civic knowledge that cannot be guaranteed in a pure elective system and that may not be included in their majors.

There is pressure everywhere for education to be more technically or vocationally focused. The case made here is that history has created a

model of education that develops the whole person, to yield critical thinkers who know how to learn and accept that necessity as inevitable. In the automation economy, the most valuable education will come from colleges and universities that can teach students how to learn. The example of the US higher education system in the past century and a half is one in which students have been allowed to study broadly, providing a community in which creativity and active learning can thrive. The forces of globalization are spreading this approach further still. The establishment of Yale-NUS College in Singapore is a strong example of the thoughtful way in which Asian nations are opening up such opportunities for their citizens. This will make them all the more prepared for the impacts of the fourth industrial revolution and enable them to live fuller lives.

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