

YALE-NUS COLLEGE
A NEW COMMUNITY OF LEARNING

A REPORT SUBMITTED BY THE INAUGURAL
CURRICULUM COMMITTEE OF YALE-NUS COLLEGE

APRIL 2013

FOREWORD

On July 1, 2012, after three and a half years of planning, the first 40 permanent faculty members joined Yale-NUS College. They spanned the fields of humanities, social sciences, and sciences, and ranged from newly minted Ph.D.s to those who had taught for twenty or more years at the National University of Singapore or at Yale. There were also a considerable number of adventurous mid-career faculty who joined our fledgling college after spending several years as faculty at excellent American institutions. A broad consensus had emerged during the previous few years about the nature of the curriculum we would be offering at Yale-NUS. The curriculum would draw on the strength of the liberal arts tradition while addressing the needs of the current century; it would make use of Western models but rethink them in an Asian context. At our first meetings, in New Haven and then in Singapore, we realized that we had a challenging and exciting task ahead of us: to develop from these general principles the full curriculum for a college that would be opening in just over a year.

While we sketched out ideas for the curriculum on blackboards, whiteboards, and flipcharts, or traded documents over wikis and blogs, we also kept in mind the broader mission of the College. A central question in our minds, articulated in a variety of ways, could be summarized thus: “*What must a young person learn in order to lead a responsible life in this century?*” The Yale curriculum reports of 1828, documents that inspired our explorations, speak of providing students with both “the *discipline* and *furniture* of the mind: expanding its powers and storing it with knowledge.” Especially in an age of commodified information, an important part of our task is furnishing young minds with stories, histories, and patterns of thought from a variety of cultures. We place equal emphasis on the discipline of the mind, the expansion of powers. So we speak of what a young person must learn, rather than what he or she must know. We speak of living a responsible life, but we understand this in a very broad sense — responsible not just to the broader community but also to oneself — what the philosophers call “the good life.” And we recognize that we must provide an education for this century — while we emphasize many of the eternal questions posed by ancient works of literature, philosophy, and political thought, we also address the most up-to-date scientific knowledge and historical research, as well as the special challenges of mastering and analyzing huge quantities of data in an information age. So we hope to communicate to our students not just a particular canon of texts or a particular body of knowledge but the range of skills and modes of inquiry provided by a liberal arts education. Our college’s location in Asia made it natural to pay special attention to the historical contributions of various Asian civilizations, but we wanted to place Western and Asian cultures in a broad global

perspective. While we shared a vision, there was nonetheless much room for debate and disagreement, and the process of working out the curriculum was one of intellectual ferment.

While we worked on the first drafts of the curriculum that is summarized in this report, we also sought to define a shared vision of the College we were building. All faculty, staff, and members of the governing board participated in discussions that led to the formulation of our vision for the College:

*A community of learning,
Founded by two great universities,
In Asia, for the world.*

This report takes up the theme of a community of learning, which draws on the traditions of American liberal arts education and underpins our notion of a common curriculum drawing on pedagogy that encourages active learning in the context of a residential college.

The arrival of the inaugural faculty was in fact the culmination of a much longer process, which I would like to sketch briefly in order to indicate our indebtedness to many who provided the framework for our efforts to develop an innovative curriculum.

Yale and the National University of Singapore, though now great research universities, have their roots in small colleges, Yale College, founded in 1701, and Raffles College, founded in 1928. Yale has played an important role in the development of liberal arts education in the United States and also in bringing American educational innovations to Asia. NUS has grown into a major research university, widely considered one of the best in Asia, and has been extremely innovative in trying to maintain an intimate undergraduate experience through residential opportunities like University Town and the University Scholars Programme. Successful earlier partnerships led to the creation of the Duke-NUS Graduate Medical School and the Yong Siew Toh Conservatory of Music (with the Peabody Institute of the Johns Hopkins University), among other programs.

NUS had been exploring the possibility of creating a small liberal arts college since the January 2007 report of Singapore's International Academic Advisory Panel suggested this possibility. Yale was identified as a potential partner in early 2009, and the two universities created faculty committees to consider the possible curriculum for such a college, the question of faculty recruitment, and the potential for residential education in Singapore. Among the leaders whose tireless contributions should

be noted are Lily Kong, Vice-President of NUS, who led the initial task force on the project and led faculty recruitment as well as many other aspects of the development of the College, and Charles Bailyn, who chaired the initial Yale committee on faculty recruitment and now serves as inaugural Dean of the Faculty of Yale-NUS. We are all also indebted to the visionary leadership of President Tan Chorh Chuan of NUS and President Richard C. Levin of Yale, as well as the organizational genius of Yale Vice President Linda Lorimer.

This curriculum report follows in many respects the lead of the initial report of the Yale faculty committee on curriculum for Yale-NUS, chaired by Haun Saussy (now at the University of Chicago) and Anthony Kronman, Sterling Professor of Law. Between the final agreement to found Yale-NUS in March 2011 and the arrival of the inaugural faculty in July 2012, a steering committee of senior NUS and Yale faculty, chaired by Vice-President Lily Kong and Dean Charles Bailyn, not only recruited a remarkable group of faculty but also brought the principles articulated by the earlier curriculum committee to bear on creating a more detailed framework for the actual curriculum. We enjoyed a remarkable year of eight faculty workshops at which colleagues from both partner institutions and from a wide range of liberal arts colleges and research universities offered their insights.

When I took office as President of the College, on the same day that our inaugural faculty joined us, I was delighted to be able to call on the talents of six remarkable colleagues who served as the College's inaugural curriculum committee: Committee Chair Bryan Garsten of Yale, Co-Chair Rajeev Patke of Yale-NUS and NUS, Dean Charles Bailyn, Divisional Directors Jane Jacobs and Kang Hway Chuan, and Bryan Penprase, a professor of Astronomy at Pomona College who spent 2012–13 as an American Council on Education Fellow at Yale and Yale-NUS. Their report outlines not only the rationale for our curriculum but also its historical and current social context, the process whereby we developed the curriculum, and our goals for future assessment and revision. I must also thank the other 36 members of the Yale-NUS faculty who have worked tirelessly this year to contribute to the development of particular courses and majors, some of which are currently outlined on our Web site.

Yale-NUS College presents indeed an opportunity to found a new community of learning. At a time when some in the United States have questioned the future of the liberal arts, Asian university leaders have been embracing liberal arts education as an alternative to their traditionally highly specialized and technical university programs. Such education is not cheap: it requires engaged teaching in small groups by faculty who care deeply about undergraduates. But in a time when the mere provision of information is becoming a commodity, it is the engaged pedagogy of the

liberal arts tradition that truly promises to add value and to train our students for a life of responsibilities, a life as citizens of the world.

More than 2,000 years ago, the philosopher Mencius wrote of the goals of education: "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." We believe that the community of learning we are founding will help our students to realize their virtues and talents to the full; this report outlines how we hope to achieve that worthy and ancient goal.

Pericles Lewis
President, Yale-NUS College

New Haven
April 4, 2013

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Bryan Garsten (*Chair*), Rajeev Patke (*Co-Chair*), Charles Bailyn,
Jane M. Jacobs, Kang Hway Chuan, Bryan Penprase

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PREFACE

WHAT SHOULD STUDENTS at a liberal arts college learn? How can they best be encouraged to learn? Creating a new college offers a chance to consider these questions in a fresh way. As the scholars involved in the creation of the new Yale-NUS College have deliberated together about precisely what to teach when the students arrive in the second half of 2013, they have grappled with fundamental and long-standing questions in collegiate education. This report, aimed primarily at colleagues in higher education, describes the distinctive way of thinking about liberal arts colleges that has emerged from these deliberations.

We are creating a new residential liberal arts college at a time when many observers in the United States are pressuring colleges to explain more persuasively the value of the education they offer. At the same time, governments and enterprises in Asia are investing heavily in creating a new set of liberal arts programs. It is therefore a good moment both to communicate the benefits of liberal arts colleges and to consider how we might make them even better and how we might adapt them to different parts of the world. In considering our own experiment in Singapore, we have sharpened our understanding of a number of issues that we think will be relevant to anyone setting up new colleges or reforming old ones. In this report we describe some of what we have learned so far.

We begin by reviewing the resilience of the liberal arts model of college education in the United States and the new interest in it in Asia, with special attention to Singapore. We then argue that a key part of what makes a college education distinct is that it aims to create and sustain a residential community of learning that is woven together by the efforts of students and faculty to communicate clearly and freely with one another about fundamental matters of human experience. We explain why we believe that asking all students to devote a significant part of their course work to one set of common curriculum courses helps to build and strengthen such a community. We argue that one must go beyond simple considerations of “breadth” and “depth” to think deeply and coherently about what should be included in a general education requirement, and we explain why we have turned the creation of a common curriculum into a project for our entire faculty. We describe some of the challenges we have faced in our efforts to create a compelling common curriculum and how we have tried to meet those challenges. We confront the tension between specialized disciplinary research and the goals of a liberal education, and we detail how we have addressed that tension. The special challenges posed by the sciences, the social sciences, and a truly cross-cultural humanities program are addressed, as is our commitment to helping students engage in intellectual

exploration. We go on to consider aspects of character that we hope the College will help students to develop, emphasizing our desire to foster good citizenship along with cosmopolitan learning, to support intellectual freedom, and to promote tolerance. We examine student learning goals and the ways that traditional and emerging models of assessment, pedagogy, and experiential and co-curricular activities can support these goals. We conclude by emphasizing that this document, and the considerations that have led to it, constitute a starting point rather than a conclusion to the process of developing our curriculum.

This report does not offer anything close to a full description of Yale-NUS College. It focuses on guiding principles for the curriculum. It does not address policies about tenure or student life, nor does it discuss the nuts and bolts of the College's operations. Of course we hope that the curricular goals of the College will be taken into account when decisions about such matters are made, but we have restricted ourselves in this report to explaining how we have thought about the educational mission and the best ways of achieving it.

The ideas in this report emerged from a long process of discussion and deliberation. Preliminary conversations among faculty from Yale, NUS, and a number of liberal arts institutions had already generated a range of ideas and goals when the first president of Yale-NUS College, Pericles Lewis, convened our committee in the spring of 2012 and charged it to plan and oversee a process of curriculum development for the new College. In July and August of that year, the entire inaugural faculty gathered in New Haven and then Singapore for four weeks of full-time workshops and discussions, jump-starting a ten-month-long phase of work together to construct a set of courses that would meet the goals of the new institution. The curriculum committee and the faculty took seriously the opportunity to write on a relatively blank slate. We studied previous experiments in higher education in various parts of the world and the history of the liberal arts; we invited scholars with different perspectives to lead discussions about pedagogical and educational issues; and we read, reflected, discussed, and debated with one another about a wide range of matters, from narrow questions of textual analysis and scientific demonstration to the broadest issues arising in college education.

As this phase of the curriculum development effort came to a close, we on the Curriculum Committee felt that we should try to articulate some of the most important and general ideas that have emerged from our conversations. Hence, this report. We do not speak for the whole faculty of the new College. We merely offer a snapshot of our own thoughts, in the hope that faculty and administrators might find what we say

to be useful when they are conducting their conversations about similar topics, just as our thinking has been inspired and influenced by reading similar documents written by educators in the past.

It is important to note that our thinking about the curriculum for Yale-NUS College took place within a framework established by previous committees. Prior to the official inauguration of the College in April 2011, two faculty committees at Yale and at NUS had discussed these matters both separately and together, converging on a number of guiding principles. Both groups emphasized the benefits of a shared intellectual experience for all students and therefore recommended the creation of a common (core) curriculum. Once the College had been inaugurated, discussions about the curriculum were closely intertwined with the search for an inaugural faculty; some understanding of the curriculum was required to know what sort of faculty would be necessary, but the newly hired faculty also had to help shape the curriculum. Three workshops in New Haven in August and October of 2011 brought faculty from Yale and other liberal arts colleges together for detailed brainstorming; five workshops in New Haven and Singapore between December 2011 and March 2012 convened similar conversations among Yale and NUS scholars who were serving on the faculty search committees and the job candidates for the inaugural faculty. At each of these events, the curriculum as it then stood was discussed and criticized, and many ideas that surfaced were incorporated into new versions of the curriculum.

Since September 2012, much of the work on the curriculum has taken place in New Haven, where the majority of the new faculty members have been living. Faculty already living in Singapore paid extended visits to New Haven, and we all made frequent use of videoconferences, online wikis, and other technologies that allowed us to work together even while we were geographically spread apart. Within the next few months, the faculty will all be together again in Singapore, awaiting the arrival of the first students. Obviously the start of classes will mark a major turning point in the development of the College. In particular, student responses to the courses after they are taught will doubtless result in significant revision to the curriculum. We also intend to gather ideas from new Yale-NUS faculty members as they are hired, from more colleagues at NUS and Yale, and from educators elsewhere. We are both proud of the work the faculty has already completed and confident that our views about many of the issues in this report will continue to evolve.

Bryan Garsten, *Chair, Yale-NUS College Curriculum Committee*

Charles Bailyn, *Dean of Faculty, Yale-NUS College*

New Haven, April 2013

1. INTRODUCTION

A COLLEGE is a distinctive sort of educational institution. Whereas a university aspires to encompass the entire ever-expanding universe of knowledge, a college aims first and foremost to humanize knowledge by weaving it into the lives of young people. Collegiate life is present whenever a group of students and faculty from various backgrounds and academic disciplines knit themselves together into a single community by studying broadly and conversing with one another about what they are studying. Through learning and teaching together in a collegial manner, they come to know one another as intellectual colleagues. As one thoughtful college president has written, a college is above all a “community of learning.”¹

Yale University and the National University of Singapore (NUS) are founding a new college together because both institutions believe that collegiate communities of learning in the liberal arts and sciences, with their distinctive characteristics and excellences, should be prominent parts of the international educational landscape in the twenty-first century.²

Higher education today is full of exciting new experiments, from online courses aimed at mass audiences who live far from campus, to increasingly specific modes of study individually tailored to meet the needs of each student, from organized media links allowing students to converse with peers without leaving their homes, to ambitious internationalization programs that help students travel to the other side of the globe. Emerging technologies and new globalized networks of partner institutions promise to spread the fruits of scholarship more widely. Easy ways of sharing great lectures and new research on the cognitive science of learning are pressuring even the most complacent teachers to devote more attention to the effectiveness of their pedagogy. All of these developments present a wealth of valuable opportunities and hint at a future in which the range of educational options will be greater than ever.³ At the same time,

1 Francis Oakley, *Community of Learning: The American College and the Liberal Arts Tradition* (Oxford University Press, 1992).

2 The phrase “liberal arts” is sometimes used in a way that excludes the sciences, especially in Asian contexts. Yale-NUS College is a liberal arts college in which the study of the sciences is vitally important. To emphasize this point we have often used the phrase “the liberal arts and sciences,” in spite of its awkwardness.

3 See, e.g., Tamar Lewin, “Public Universities to Offer Free Online Classes for Credit,” *The New York Times*, 23 January 2013, <http://www.nytimes.com/2013/01/23/education/public-universities-to-offer-free-online-classes-for-credit.html>; Tamar Lewin, “MOOCs, Large Courses Open to All, Topple

enormous uncertainty exists now about the sustainability and value of various modes of education, and leaders in industry and education have recently called for major new assessments of the future of colleges and universities.⁴

We believe that residential colleges in the liberal arts and sciences can offer a distinctive and vital mode of learning even as different sorts of education emerge. If such colleges embrace their best and most distinctive features, especially their ability to offer membership in a comprehensive community focused on learning about fundamental questions of human experience, we think that they will be ever more attractive to students and their parents and ever more valuable to the cultural, economic, political, and intellectual life of their societies. Online initiatives offer easy and inexpensive access to information, but college education aims to do much more than convey information. Collegiate communities of learning offer face-to-face classroom experiences and links between the classroom and the rest of life that extend beyond what online courses and modularized universities can deliver on their own. Colleges need not – and should not – reject new technologies and models of learning, but they should insist on evaluating the importance of such innovations by considering whether they will enrich the unique experience of living and studying together in a college community.

Both Yale and NUS hope that Yale-NUS College will serve as a point of reference for experiments in higher education throughout Asia and for curricular reforms at colleges everywhere. Each educational institution must grapple with the distinct aspirations and difficulties of its own context, so we do not offer our curriculum as a blueprint. Nevertheless, any institution aiming to achieve the goals of collegiate learning will have to meet some common challenges that are intrinsic to the very idea of a liberal arts college. This report is a record of how one group of scholars who were offered the chance to found a new community of learning saw and approached issues that are fundamental to any college, whether long-established or, like ours, brand new.

Campus Walls,” *The New York Times*, 4 March 2012, <http://www.nytimes.com/2012/03/05/education/moocs-large-courses-open-to-all-topple-campus-walls.html>; Thomas L. Friedman, “Revolution Hits the Universities,” *The New York Times*, 26 January 2013, <http://www.nytimes.com/2013/01/27/opinion/sunday/friedman-revolution-hits-the-universities.html>; David Skorton and Glenn Altschuler, “MOOCs: A College Education Online?,” *Forbes* (28 January 2013), <http://www.forbes.com/sites/collegeprose/2013/01/28/moocs-a-college-education-online>; Alexandra Tilsley, “Yale Takes Time to Reflect, Evaluate Before Jumping into MOOCs,” *Inside Higher Ed* (29 January 2013), <http://www.insidehighered.com/news/2013/01/29/yale-takes-time-reflect-evaluate-jumping-moocs>.

4 Goldie Blumenstyk, “Carnegie Leader Calls for Presidential Commission to Guide Higher Education’s Future,” *The Chronicle of Higher Education* (21 November 2012), <http://chronicle.com/article/Carnegie-Leader-Calls-for/135890>.

We have not been satisfied merely to repeat commonplace formulations about the importance of “combining research and teaching,” of offering “breadth as well as depth,” or of improving “critical thinking skills.” Complacent formulas such as these hide real dilemmas of collegiate education, and we have sought to address these dilemmas as directly and honestly as we can in this document and, more importantly, in the institutions and practices we are setting up in the new college.

It will come as no surprise that one chief challenge we face is how to approach the tension between specialized and general education. Pressures to specialize arise from the requirements of careers after graduation, from the progress of human knowledge into ever more dispersed and sophisticated forms of expertise, and from the desire to allow each individual student to explore and develop as far as possible his or her unique potential. These three factors together produce a tremendous centrifugal force on the educational trajectories of students and faculty alike, pulling them away from any center of gravity that a college may try to establish into a thousand distinct orbits of their own.

Few people would deny the importance of career specialization, either for individuals seeking economic security and personal fulfillment, or for the society as a whole as it pursues economic stability and growth. Even fewer would deny the benefits of expanding knowledge or the value of individuality; we certainly do not do so here. We do, however, try to create a curriculum in which these goals do not obscure a different set of purposes, ones that require a community held together by more than shared buildings and a shared commitment to research. We have tried to create a curriculum that occasions the deep and subtle sort of conversations that are possible only with people who have read the same books and grappled with the same problems; a curriculum that instills the habits of critical judgment and forbearing tolerance that arise from seeing peers struggle with problems one knows well oneself; a curriculum that fosters the sense of shared belonging through which collegiate life proves to young people that it is possible to live in a community built on commonalities other than class, religion, ethnicity, or ideology.

No college can succeed without a dash of utopianism. In this document we build a collegiate city in words. Whether it is possible for this community to succeed in practice will be known not so much by consulting the arguments that will be raised for or against this document, but by watching Yale-NUS College in the years to come.

2. HISTORICAL CONTEXT: WHY HERE? WHY NOW?

*Liberal arts colleges
in the United States*

EARLY IN THE TWENTIETH CENTURY David Starr Jordan, the founding president of Stanford University, voiced a skepticism that many educators felt then about the future of collegiate learning in the United States. With the arrival of large research universities such as Stanford, Johns Hopkins, and Cornell, it seemed hard to see how the traditional American college would remain viable. “The college,” Jordan predicted, “will disappear, in fact, if not in name. The best will become universities, the others will return to their place as academies [high schools].”⁵ Jordan’s prediction, obviously inaccurate, was based on a failure to see the distinctive role that liberal arts colleges played in American higher education and the special features that gave them certain advantages over their larger competitors. As Francis Oakley points out, the American college came not from the German system in which “academies” preceded universities, but instead from the Oxbridge system and from a variant of it in which each university college could issue its own degrees, as Trinity College did in Dublin, Ireland. Colleges were, in this system, ways of organizing university learning to create intense communities of tutors and students. Europe had produced the roots of Western liberal education in medieval curricula organized around the *quadrivium* and *trivium* and the model for colleges in the small communities of tutors and students living together around shared courtyards. Emigrés from Europe then planted the seeds of college in colonial America.

In early American history the college was the vessel of Puritan hopes and teaching was mixed with missionary zeal. By the middle of the nineteenth century, however, the training of ministers moved to seminaries designed specifically for that purpose, and many colleges developed a secular-humanist curriculum with enough momentum to carry them through the challenge posed by the introduction of the German research university model later in that century.⁶ The small liberal arts college came into its own

5 Quoted in Frederick Rudolph, *The American College and University: A History* (Knopf, 1962), 68, 443, as cited in Francis Oakley, “The Liberal Arts College: Identity, Variety, Destiny,” in *Liberal Arts Colleges in American Higher Education: Challenges and Opportunities*, ACLS Occasional Paper, no. 59 (American Council of Learned Societies, 2005), 2, http://www.acls.org/uploadedfiles/publications/op/59_liberal_arts_colleges.pdf.

6 See, e.g., Andrew Delbanco, *College: What It Was, Is, and Should Be* (Princeton University Press, 2012), 76–81; Roger L. Geiger, “Context for a Compelling and Cogent Case,” in *Liberal Education for a Land of Colleges: Yale’s Reports of 1828*, by David B. Potts (Palgrave Macmillan, 2010),

in the United States even as the liberal arts idea faded in Europe. The best American colleges incorporated elements of the research ideal, drawing their faculty from the growing ranks of Ph.D.s and modernizing their curricula to reflect the new contours of disciplinary knowledge, but they remained focused with special intensity on what had always been their calling, the education of undergraduates. Some of the most elite research institutions, such as Yale and Harvard, instituted systems of housing and instruction early in the twentieth century that were designed to preserve collegiate communities at the heart of their growing universities.

At the end of the twentieth century, liberal arts colleges remained a vibrant part of the higher educational scene in the United States. A 1998 study found that even though only three percent of American college graduates were educated at residential liberal arts colleges, alumni of these colleges accounted for a disproportionate share of high achievement in many fields. Liberal arts alumni comprised

- 19 percent of U.S. presidents;
- 23 percent of Pulitzer Prize winners in drama, 19 percent of the winners in history, 18 percent in poetry, 8 percent in biography, and 6 percent in fiction from 1960 to 1998;
- 8 percent of *Forbes* magazine's listing of the nation's wealthiest CEOs in 1998
- 8 percent of former Peace Corps volunteers;
- 9 percent of all Fulbright scholarship recipients and 24 percent of all Mellon fellowships in the humanities.⁷

Similarly, a group of small liberal arts colleges known as the "International 50" was seen to have a disproportionate impact in terms of their ability to prepare students for international leadership. While only producing 1.8 percent of the baccalaureate degrees in the United States, this group of fifty colleges had remarkable success, as noted by former Pomona College President Peter Stanley:

[I]ts share of US ambassadors and students enrolled in graduate schools of international affairs was roughly six times its share of undergraduate degrees; it produced five times as

227–34; Anthony T. Kronman, *Education's End: Why Our Colleges and Universities Have Given Up on the Meaning of Life* (Yale University Press, 2007), 59–61, 106–114. See also Philip L. Harriman, "Antecedents of the Liberal-Arts College," *The Journal of Higher Education* 6, no. 2 (1935): 63–71.

⁷ "About Liberal Arts Colleges," The Annapolis Group, <http://collegenews.org/about-liberal-arts-colleges>.

many U.S. foreign service officers, Ph.D.'s in international fields, and lawyers specializing in international law, and 2.5 times as many Peace Corps volunteers.⁸

Some observers of higher education today have been tempted to utter pronouncements about the demise of the liberal arts college similar to the prediction that David Starr Jordan made a century ago. We do not think such a prediction would be any more accurate today than it was when Jordan made it. If we look beyond our borders, we find there is, in fact, a new wave of interest and investment in more liberal styles of education.

*The growing interest
in liberal arts in Asia*

Any observer of trends in higher education in Asia knows that interest in the liberal arts has been on the rise recently. After a period during which technical expertise for a manufacturing economy dominated the list of educational goals, a growing number of leaders in government, civil society, and business have become convinced of the need for a broader style of education more likely to produce creativity, innovation, and multidisciplinary analysis. Opinion leaders have indicated the need to leave behind educational models based on rote memorization in favor of models emphasizing more flexible and analytic styles of thought.⁹ There is also a new opening for a reevaluation of the arts and humanities, which have for a long time been viewed as subjects not worthy of serious study by top students. Generally speaking, the highest-scoring students in many parts of Asia have been tracked, through formal or informal means, into the sciences or the law, with the next level encouraged to take up commercial pursuits; arts and humanities are often left for students perceived as less talented. The respect for intellectuals that was found in traditional Chinese and Indian society sometimes manifests itself today as esteem for scientists, lawyers, or businessmen, who also garner appreciation and rewards for the concrete contributions they make to technological progress and economic development. Linked to that contribution to economic advancement is the simple fact that many students who are not born to wealth will

8 Peter W. Stanley, "At Home in Our World: The Place of International Studies in Liberal Arts Colleges," in *Distinctively American: The Residential Liberal Arts Colleges*, ed. Steven Koblak and Stephen R. Graubard (Transaction Publishers, 2000), 283.

9 Ai-Tee Koh, "Linking Learning, Knowledge Creation, and Business Creativity: A Preliminary Assessment of the East Asian Quest For Creativity," *Technological Forecasting and Social Change* 64, no. 1 (May 2000): 85–100, [http://dx.doi.org/10.1016/S0040-1625\(99\)00075-X](http://dx.doi.org/10.1016/S0040-1625(99)00075-X). See also Jason Tan and S. Gopinathan, "Education Reform in Singapore: Towards Greater Creativity and Innovation?," *NIRA Review* 7, no. 3 (Summer 2000): 5–10, <http://unpan1.un.org/intradoc/groups/public/documents/APCITY/UNPAN024367.pdf>; Cheng Han Tan, "Challenges to Legal Education in a Changing Landscape – A Singapore Perspective," *Singapore Journal of International & Comparative Law* 7 (2003): 545–78, <http://www.commonlii.org/sg/journals/SGJIntCompLaw/2003/20.html>.

naturally pursue technical abilities or business skills because they offer a path toward a more comfortable life. The humanistic disciplines that are an integral part of liberal arts education have often seemed, from the perspectives of the developing state and the ambitious individual, either a distraction or a luxury.

Although these generalizations remain relevant today, there are many signs that attitudes are changing.¹⁰ Universities have been introducing liberal arts courses and programs within their existing offerings and even creating wholly new colleges designed to emphasize broader modes of education. In South Korea, Seoul National University and Yonsei University have both introduced substantial liberal arts programs since 2007. In Japan, Waseda University launched a School of International Liberal Studies in 2004, and the University of Tokyo reorganized its Faculty of Arts and Sciences in 2011 to “promot[e] thinking across disciplinary boundaries.”¹¹ Hong Kong saw the renewal of Lingnan University, devoted to the liberal arts,¹² and has just recently introduced an additional full year of general education course work at all of its major universities.¹³ China indicated its interest in reforming its education system in this direction in a major 2001 report from the Ministry of Education, summarized in this way:

*Change the overemphasis on transmission learning in the implementation of curriculum, and the emphasis on rote memorization and mechanical drill. Promote instead students’ active participation, their desire to investigate, and eagerness to use their hands. Develop students’ ability to collect and process information and to analyze and solve problems. Cultivate also the capacities for cooperation and communication.*¹⁴

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- 10 Mara Hvistendahl, “Less Politics, More Poetry: China’s Colleges Eye the Liberal Arts,” *The Chronicle of Higher Education* 56 (3 January 2010), http://viet-studies.info/Chinese_LessPolitics_CHE.pdf; Karin Fischer, “Bucking Cultural Norms, Asia Tries Liberal Arts,” *The Chronicle of Higher Education* 58, no. 23 (5 February 2012): A1–A8, <http://chronicle.com/article/Bucking-Cultural-Norms-Asia/130667>; Richard C. Levin, “Top of the Class: The Rise of Asia’s Universities,” *Foreign Affairs* 89, no. 3 (May/June 2010), <http://www.foreignaffairs.com/articles/66216/richard-c-levin/top-of-the-class>.
- 11 “Faculty of Arts and Sciences,” The University of Tokyo, <http://www.u-tokyo.ac.jp/en/admissions-and-programs/undergraduate-students/faculties/arts-and-sciences.html>.
- 12 “Liberal Arts Education at Lingnan University,” Lingnan University, <http://www.ln.edu.hk/info-about/liberal-arts>.
- 13 Nick Clark, “Hong Kong’s Education Reforms and Internationalization Plans,” *World Education News & Reviews* 24, no. 1 (January/February 2011), <http://www.wes.org/ewenr/11feb/practical.htm>.
- 14 Ministry of Education of the People’s Republic of China, *Framework for the Curriculum Reform of Basic Education* (2001), quoted in Tanja Carmel Sargent, “Revolutionizing Ritual Interaction in the Classroom: Constructing the Chinese Renaissance of the Twenty-First Century,” *Modern China* 35, no. 6 (2009): 633; Martha C. Nussbaum, “Democracy, Education, and the Liberal Arts: Two Asian Models,” *UC Davis Law Review* 44 (2010): 735–72.

Fudan University, Peking University, and Nanjing University all have new programs in liberal arts or general education, and stand-alone liberal arts colleges such as United International in Zhuhai have been born in the recent past.¹⁵ Sun Yat-sen University, in Guangzhou, asks students in its new Boya program to master Latin among many other liberal arts subjects as part of a new curriculum introduced in 2009.¹⁶ NYU Shanghai, set to open in the fall of 2013, will incorporate elements of the liberal arts. New projects in Indonesia, Taiwan, Malaysia, and Thailand also explore variants of the liberal arts model.¹⁷

In India, the 2009 Yashpal Report included recommendations relevant to the liberal arts, and in the summer of 2012 a committee recommended to the Ministry of Human Resource Development that a new liberal arts college be set up in Pune, perhaps to be named after Rabindranath Tagore, whose ideas about education remain widely influential.¹⁸ One of India's prominent businessmen has recently indicated his commitment to the liberal arts, too. Anand Mahindra, in an interview this past October titled "Don't Think India Can Afford Not to Study the Liberal Arts," noted that, "Conflict resolution and creating a better world do not come from an improved piece of software or a better engine or technology but from people who can break free from their rigid points of view."¹⁹ The Mahindra United World College of India recognizes this point of view

15 Mara Hvistendahl, "Less Politics, More Poetry: China's Colleges Eye the Liberal Arts."

16 Karin Fischer, "Bucking Cultural Norms, Asia Tries Liberal Arts."

17 In Indonesia, one project is Universitas Pembangunan Jaya (UPJ) in Tangerang: see "Liberal Arts," Universitas Pembangunan Jaya, <http://upj.ac.id/liberal-arts>. Two of Thailand's top academic and research institutions, Mahidol and Thammasat Universities, are entering into formalized collaboration with the College of Liberal Arts of De La Salle University, Philippines: "College of Liberal Arts Forges Ties with Thai Universities," De La Salle University, 12 December 2012, <http://iblog.lasalle.ph/2012/12/college-of-liberal-arts-forges-ties-with-thai-universities>. In Malaysia, the Asian Women's Leadership University is being founded in partnership with Smith College: "Smith College to Serve as Chief Academic Planning Partner for New Women's University in Asia," Smith College, 15 March 2012, <http://www.smith.edu/newsoffice/releases/NewsOffice12-012.html>; see also <http://awlproject.org>. In Taiwan, Tunghai University started the POYA liberal arts school in 2008, and National Tsing Hua University opened its Tsing Hua residential college dormitory in the same year, designed to integrate living and learning.

18 Government of India Ministry of Human Resource Development, *Report of the Committee to Advise on Renovation and Rejuvenation of Higher Education* (June 2009), <http://www.academics-india.com/Yashpal-committee-report.pdf>; Ritika Chopra, "Pune to Get India's First Ever Liberal Arts College," *India Today*, 30 July 2012, <http://indiatoday.intoday.in/story/pune-to-get-india-first-ever-liberal-arts-college/1/210936.html>.

19 "Don't Think India Can Afford Not to Study the Liberal Arts," *Hindustan Times*, 5 October 2010, <http://www.hindustantimes.com/India-news/Mumbai/Don-t-think-India-can-afford-not-to-study-the-liberal-arts/Article1-608428.aspx>. See also Vedika Khemani, "Why a Liberal Arts

in its curriculum, as do other institutions recently set up. The *India Today Ranking 2012* list identifies fifty colleges in India that are said to profess a liberal arts orientation of one kind or another.²⁰ Recent projects in a similar spirit include Ashoka University, Azim Premji University, Shiv Nadar University, Symbiosis International University, and O.P. Jindal Global University. Even the Institutes of Technology and Management in India have introduced humanities courses for all students, hoping to encourage them to learn to interact respectfully with peers from different castes and religions.²¹

The most ambitious of recent initiatives may be the plan to open Nalanda University in 2014 in Bihar, India. Nalanda was a major center of learning early in the first millennium, long before Cambridge and Oxford, and even before the older universities in Bologna and Cairo. It drew as many as 10,000 students at a time from across Asia to study in an atmosphere influenced by Buddhist teachings. They came to study subjects such as astronomy, fine arts, politics, and medicine, and until its fall in 1197 A.D., Nalanda was a place where the various cultural traditions of Asia encountered one another in a peaceful intellectual environment. In reviving this ancient university, the Nobel Prize-winning economist Amartya Sen and others are aiming to recreate a powerful Asian institution, deeply rooted in ancient tradition but also putting Asian scholars at the forefront of thinking about educational challenges for the future, such as the environment.²²

Each of these initiatives has its own understanding of what a liberal education is, and each develops from different historical and cultural foundations. In China, some institutions aim to build on a mode of broad education for leaders that stretches back

Education Matters,” *India Ink* (blog), *The New York Times*, 1 February 2012, <http://india.blogs.nytimes.com/2012/02/01/choice-on-india-ink-liberal>.

20 “Top Arts Colleges in India,” *India Today Ranking 2012*, <http://www.minglebox.com/arts/top-arts-colleges>.

21 Martha C. Nussbaum, *Not for Profit: Why Democracy Needs the Humanities* (Princeton University Press, 2010), 93.

22 Jeffrey E. Garten, “Really Old School,” *The New York Times*, 9 December 2006, <http://www.nytimes.com/2006/12/09/opinion/09garten.html>; Andrew Buncombe, “Oldest University on Earth Is Reborn after 800 Years,” *The Independent*, 4 August 2010, <http://www.independent.co.uk/news/world/asia/oldest-university-on-earth-is-reborn-after-800-years-2042518.html>; Faizan Ahmad, “Amartya Sen Named Nalanda University Chancellor,” *The Times of India*, 20 July 2012, http://articles.timesofindia.indiatimes.com/2012-07-20/news/32763124_1_nalanda-university-board-members-george-yeo.

centuries in the curricula for Mandarin civil servants.²³ In India, some recent experiments take their inspiration from the Visva-Bharati College (now University) at Santiniketan, near Kolkata, established in 1921 by Tagore, who aimed to foster an educational system radically different in ethos from a conventional university, while others grow naturally out of much older institutions, such as Nalanda.

While the terms “liberal” and “liberal arts” are often used to describe the new programs, those words do not refer to any definite set of characteristics common to all of these initiatives. Some of the new projects emphasize character development and citizenship, while others emphasize interdisciplinary study and creativity. Most aim to remedy a tendency toward early specialization that was common in the British university models that were so influential in Asia due to colonialism, and in the Russian technical university format that has been prominent in China and, differently, in India. In this time of proliferating new initiatives, Yale and NUS see an opportunity to reflect together on what a new generation of liberal arts and sciences education could add to the mix of offerings emerging in Asia.

In designing this new college, both Yale and NUS are sensitive to the fact that previous experiments in supporting the liberal arts in different parts of Asia have not always been successful. Consider, as an example of a path for Yale-NUS College not to follow, the effort of the United States to introduce liberal arts education to Japan after the Second World War. In 1946, as part of the postwar occupation, the United States Education Mission issued a report that included this sentiment:

In the curriculum of Japanese institutions of higher education, we think, as has already been suggested, that for the most part there is too little opportunity for general education, too early and too narrow a specialization, and too great a vocation or professional emphasis. A broader humanistic attitude should be cultivated to provide more background for free thought and a better foundation on which professional training may be based.... The general education should, we feel, be integrated with the regular curriculum planned for each student, so that he can get full credit for it and not regard it as something extra and separate....²⁴

²³ Benjamin A. Elman, *A Cultural History of Civil Examinations in Late Imperial China* (University of California Press, 2000).

²⁴ *Report of the United States Education Mission to Japan* (1946), quoted in Bruce A. Kimball, “Japanese Liberal Education: A Case Study in Its National Context,” *Teachers College Record* 83, no. 2 (1981): 249.

The next year, a new law tasked Japanese universities with exposing students to a general education that included “in part the scientific method but...also...the methods of philosophy and the ability to think broadly and deeply about man, history and culture...not content with the ability to acquire information alone.”²⁵

The superficial similarity between the intentions described above and our own motivations cannot be ignored, especially because this mid-century experiment was, by most accounts, not a successful one. According to one representative assessment in the 1980s, the liberal arts programs introduced in that wave of reform were too often taught in large lecture courses by faculty paid less than researchers at the universities. Liberal arts faculties were often housed in separate facilities and given many more students and much less prestige than their researching peers. The general education courses were not rigorous and involved little if any continuous assessment. The courses were often taught by outside lecturers without a sustained responsibility to the students or the institution. Institutional rigidity discouraged innovation in pedagogy. The strategy of adopting one educational model for the nation, suggested by the United States and carried through by the Japanese state, did not allow the sort of variety and experimentation that has fueled innovations in education elsewhere.²⁶ More recent reformers in Japan have learned lessons from these earlier efforts, as the new initiatives at the University of Tokyo and Waseda University demonstrate.²⁷

We, too, have tried to learn lessons from the literature on earlier experiments. Though it is impossible to anticipate all the obstacles that our project will face, Yale-NUS College is organized in a way that mitigates each of the problems named above: most of the College’s regular faculty will participate in designing and teaching the common curriculum; learning will take place largely in small, interactive seminars; course content and pedagogy will be reviewed frequently; innovation in teaching will be encouraged and supported with college resources and recognized in promotion criteria. Of course there are also deeper cultural and historical influences on the trajectory of educational institutions, but insofar as institutional lessons can be learned from case studies, we have attempted to profit from them. We have followed with interest difficulties

25 Ibid.

26 Ibid. Nori Morita, “Liberal Arts Education in a New Key: The Case of School of International Liberal Studies, Waseda University” (paper presented at the 4th CLS International Symposium 2012: Renaissance of Liberal Studies in Asian Universities, Seoul National University, 19 October 2012).

27 Takane Ito, “Liberal Arts Education at College of Arts and Sciences, The University of Tokyo” (paper presented at the 4th CLS International Symposium 2012: Renaissance of Liberal Studies in Asian Universities, Seoul National University, 19 October 2012); Morita, “Liberal Arts Education in a New Key.”

encountered by several recent ventures in Singapore. The University of New South Wales Asia, although well supported by the Singaporean government, closed soon after opening due to insufficient student enrollments. That lack of interest was determined in part to be a result of it not offering a sufficiently distinct curriculum. Similarly, NYU's Tisch School of the Arts Asia, which opened in 2007 and offered master's training in the digital arts, film, and dramatic writing, suspended admissions just five years later, after a business model premised on the possibility of creating a filmmaking industry in Singapore did not succeed quickly enough to sustain the institution financially. We have tried to identify the causes of these and other failures and remain alert to any lessons we might learn from them.

One key fact about our project is that it has not been projected onto Singapore from the outside. Singapore has been investing in education strategically, and NUS has been seeking a partner to develop a liberal arts college for some time. In fact, the founding of Yale-NUS College is the latest chapter in an unfolding series of ambitious experiments in educational innovation that began in Singapore in the late 1990s. Like other "Asian tigers," Singapore reevaluated its plans for economic growth in the aftermath of the Asian financial crisis and concluded that a more dynamic, innovative economy was necessary. Its leaders believed changes in the educational system were required to provide a citizenry capable of supporting these new modes of activity.²⁸ The government launched a "Thinking Schools, Learning Nation" initiative in 1997 and a "World Class University" program in 1998. One immediate outcome was the Singapore-MIT Alliance, a collaboration on education in engineering and the life sciences among the National University of Singapore, Nanyang Technological University, and the Massachusetts Institute of Technology. This was soon followed by initiatives in biomedical sciences that led to several outcomes, including the founding of the Duke-NUS Graduate Medical School in 2005. The INSEAD business school took in its first Singapore-based cohort of M.B.A. students in 2000.

In addition, a new emphasis on culture and the arts could be seen in educational policy and investment. The Yong Siew Toh Conservatory of Music, as it is now known, represents a collaboration between NUS and the Peabody Institute of Johns Hopkins University and draws talented young musicians from all over East and Southeast Asia to Singapore. Until recently, students interested in the studio arts or the performing arts had recourse only to the LASALLE College of the Arts, founded in 1984, or smaller private organizations. Educational reform in the creative arts came to include

²⁸ Kris Olds, "Global Assemblage: Singapore, Foreign Universities, and the Construction of a 'Global Education Hub,'" *World Development* 35, no. 6 (June 2007): 959–75, <http://dx.doi.org/10.1016/j.worlddev.2006.05.014>.

other options such as the School of Art, Design and Media, which opened in 2005 at Nanyang Technological University, and NYU's Tisch Asia, though Tisch has recently announced an intention to close. The alliance with MIT has recently produced the Singapore University of Technology and Design.

The variety of approaches on offer indicates that Singapore is not repeating the mistake made by earlier state-led initiatives, that of imposing one educational model on an entire national system of higher education. Instead the state has adopted a policy of creating a variegated ecosystem of educational institutions, self-consciously aiming to create an educational hub in the region, a "Boston of the East," as the Minister of Education put it in a speech on the topic.²⁹ The decision to decentralize was itself an intentional choice designed to introduce variety and competition and thereby energize the education sector.³⁰

Singapore's ambition in higher education pointed most clearly in the direction of the liberal arts when NUS launched the University Scholars Programme (USP) in July 2001.³¹ This initiative built upon earlier moves toward a new appreciation of general education, including the adoption, in the 1990s, of a common course credit system throughout the university that allowed students more flexibility, and, in 1999, a Core program that developed into a General Education program in 2001.³² The University Scholars Programme offers small class sizes, interdisciplinary study, residential living, targeted study abroad experiences, and close integration between curricular and co-curricular activities.³³ It is proof that a liberal arts style of teaching can work well in Singapore, and indeed leaders of that program have been invaluable partners in developing our vision for Yale-NUS College.

29 Teo Chee Hean, "Education Towards the 21st Century – Singapore's Universities of Tomorrow" (Alumni International Singapore (AIS) Lecture, NUSS Guild Hall, 7 January 2000), <http://www.moe.gov.sg/speeches/2000/sp10012000.htm>, cited in Ibid.

30 Michael H. Lee and Saravanan Gopinathan, "Centralized Decentralization of Higher Education in Singapore," in *Centralization and Decentralization: Educational Reforms and Changing Governance in Chinese Societies*, ed. Mok Ka-Ho, CERC Studies in Comparative Education 13 (Kluwer Academic Publishers, 2004): 117–36. Michael H. Lee and Saravanan Gopinathan, "University Restructuring in Singapore: Amazing or a Maze?," *Policy Futures in Education* 6, no. 5 (2008): 569–88, <http://dx.doi.org/10.2304/pfie.2008.6.5.569>.

31 See <http://www.usp.nus.edu.sg/aboutusp/index.html>.

32 Peter Pang, "Strategy for the Development of a Global City: Study Abroad in Singapore," in *The Handbook of Practice and Research in Study Abroad: Higher Education and the Quest for Global Citizenship*, ed. Ross Lewin (Routledge, 2009), 230–46.

33 Ibid. See also Kenneth Paul Tan, "Service Learning Outside the U.S.: Initial Experiences in Singapore's Higher Education," *PS: Political Science & Politics* 42, no. 3 (July 2009): 549–57, <http://dx.doi.org/10.1017/S104909650909088X>.

At the same time, the University Scholars Programme offers an experience more tightly woven into the rest of NUS than the Yale-NUS program will be. A fraction of the students' course work takes place in USP, and only part of their time in the program is spent in residence in USP campus dormitories. The program has therefore focused more on the development of courses that synthesize various fields, and on offering students community service and study abroad opportunities, than on aspiring to build a general education curriculum. USP offers a different approach to the question of how to balance specialization and general education. Its experience in negotiating these questions, however, has been one major influence on the development of our thinking about Yale-NUS.

In addition to all of these initiatives, NUS has demonstrated a sustained commitment to finding an appropriate partner with which to develop a more immersive liberal arts college. NUS explored possible partnerships with various institutions, including the University of Warwick in the United Kingdom and the Claremont consortium of colleges in California. Though these initiatives did not go forward, the conversations about them sharpened NUS's sense of the sort of partnership that would make the most sense, and also its recognition that partners would require operational autonomy and guarantees of intellectual freedom. Yale University, with its experience in fostering some of the best aspects of a small liberal arts college at its undergraduate institution even while hosting a top research university, came to seem a good fit.

The opportunity offered by the Yale-NUS partnership

The resources pledged to this project create an unprecedented opportunity to create a new college from the ground up, designing both a campus and a curriculum in ways that are hardly imaginable within the context of an existing institution.

Few things are more difficult than to create fundamental changes in institutions that already exist. During the past quarter century, for example, many elite institutions in the United States have conducted major reviews of their undergraduate curricula—Harvard, Yale, and Stanford have issued major public reports. These reports often begin with concerns that might point to the need for significant changes, yet end by recommending only tweaks to the existing system. Entrenched interests within each institution—guarded, often quite justifiably, by powerful academic departments—combine with long traditions and loyal alumni to oppose any fundamental shift in approach. When reforms are permitted, they are often introduced in a piecemeal fashion rather than as a coherent whole, and they often must swim against the tide of other institutional conventions and practices.

At Yale-NUS College, these forces resisting change do not exist. There are no entrenched department interests – indeed, as we will discuss below, there are no departments. There are no courses or curricular tracks honed to a fine edge by years of individual or collective effort that might be endangered by a new approach. And there are, as of yet, no alumni. Thus, a new institution like Yale-NUS has a unique opportunity to ask which of the various existing models of general education might be the most effective, and whether new models that do not exist at all in long-standing institutions might do even better. The question of “how do we get there from here” simply does not arise; the only question is, “where do we want to start?”

It is important to note that aspects of what we now consider to be a liberal arts education have been employed in many different cultures and moments. In what follows we describe the components that we consider to be the most important for such an education in our time and place. We therefore pay attention to considerations such as the advent of the Internet, which provides citizens with unprecedented access to information and data without recourse to any institutional structures; the emergence of a greater number of global issues from which no society can isolate itself; the consequent need for different cultures to work together to address these issues; and the extraordinary rate of technological change, which results in societies whose most basic contours continually evolve on timescales significantly shorter than a human lifetime. This combination of factors has prompted us to make particular educational choices and emphasize particular themes, as have factors unique to Singapore’s location, history, and demography. When Yale debated liberal education in 1828, it took ideas from European universities that had preceded it but also insisted on avoiding inappropriate imitation of them. Similarly, Yale-NUS College will have to find its own path forward, drawing from the experience of others and innovating on its own.

Many of the priorities that we outline in the following pages are ones that have been recommended before. Few colleges, however, have been fortunate enough to have a chance to incorporate them into a coherent overall design and to actually put that design into practice. One thoughtful survey of many reports on liberal education from the mid-1990s summarized their points of convergence in this way:

According to my reading, the reports...would point to sweeping and fundamental changes in undergraduate education, such as eliminating the academic departments and majors and requiring all graduating students to be able to write persuasively, to speak effectively and extemporaneously on any topic, and to offer evidence of citizenship.³⁴

³⁴ Bruce A. Kimball, *Orators and Philosophers: A History of the Idea of Liberal Education* (College Entrance Examination Board, 1995), 288–89.

The author of those words wrote them assuming that his readers would see just how little impact curricular reports have, since few colleges have in fact enacted the changes that their self-evaluations suggested. We, however, are able to read his words differently: almost all of the ideas mentioned above – the “sweeping and fundamental changes in undergraduate education” – will be institutionalized in one form or another at Yale-NUS College. Chief among these ideas is a focus on articulate communication.

3. A FOCUS ON ARTICULATE COMMUNICATION

A distinctive kind of conversation

ALL COMMUNITIES are based upon certain habits of communication. Collegiate communities of learning come into being largely through substantive conversation among their members. “Open, informed, and reflective discourse” – an activity of speaking and listening, writing and reading, that is partly its own end, in which participants assume that others will pay attention, and through which they hope to come to know something they did not know beforehand – *this* is the central and distinctive activity of collegiate education in the liberal arts and sciences.³⁵ It follows that colleges should emphasize the importance of speaking and writing, and also of the visual and performing arts and other modes of engaging in substantive communication. Online discussion, and perhaps even texts and tweets, might supplement this sort of interaction. But a residential college requires sustained conversation and repeated encounters between individuals who cannot self-segregate into like-minded groups as easily as they can online, who run into one another accidentally rather than through arranged activities, who find a meeting planned for one purpose yielding an unexpected discussion about wholly different matters. To encourage this sort of spontaneous, sustained and substantive engagement, the Yale-NUS College curriculum puts great emphasis on face-to-face encounters and on the practices of articulate communication appropriate for intellectual conversation.

What would it mean to make articulate communication central to the intellectual culture of a college? Faculty members would pursue advances in knowledge through cutting-edge research just as scholars do elsewhere, but they would regard that research as incomplete if it is not expressed publicly to the community – not only the international community of peers in their disciplines, but also the immediate community of their colleagues and students in the college. Students would spend long hours studying in the laboratory, the field, the museum, or the library, but they would regard their efforts as half-finished until they have presented the fruits of their work to their roommates, classmates, and mentors. Scientists investigating the properties of ultra-thin metals would learn to present their findings to audiences of poets as well as engineers, and scholars of ancient literature would learn to write for readers outside the academy as well as for the readers of literary reviews. Devoting attention to the

35 David Bromwich, *Politics by Other Means: Higher Education and Group Thinking* (Yale University Press, 1992), 131.

articulate expression of arguments and evidence is necessary to ensure that the various intellectual activities taking place at the college can be woven into one community of learning.

Emphasizing articulate communication is in some ways a return to earlier norms in collegiate education. In the eighteenth and nineteenth centuries it was common for all students to take at least several semesters of course work on rhetoric or oratory, often as the capstone experience of their time in college. Those requirements died out as the faculty more and more came from the ranks of Ph.D.s who had been trained to regard the production of original knowledge as the apex of academic achievement. An experience with research, in which a senior thesis experience aims to give students a chance to make their own small contribution to knowledge, came to supplant a course in rhetoric as the senior capstone.³⁶ More generally, the quest for knowledge came to supplant the desire to speak and write well as the principal ethic of collegiate life.

In theory, the goals of knowledge and articulate communication need not be mutually exclusive. In practice, however, the growing dominance of the research ideal in particular disciplines has had the effect of deemphasizing skills of writing, communication, and persuasion. More precisely, it has had the effect of changing the students' understanding of their audience, for in writing their senior projects they now aim to satisfy the specific expectations of an academic discipline, each with its own specialized terminology and norms, rather than writing for an audience of generally educated peers. The acquisition of an appropriate vocabulary and a particular conceptual toolkit has come to serve as an entryway to a professional guild of disciplinary knowledge-producers, and the culmination of an undergraduate education has come to be seen as membership in such a guild, even though the vast majority of students will not, in fact, devote their lives to academic research.³⁷

We do not, of course, seek to return to the nineteenth century. We believe that student experience with research should be a central aspect of collegiate education, as discussed in a separate section below. Nor do we even require all students to take a course in rhetoric or composition, much less in something as quaint-sounding as oratory (though at Yale such courses are popular electives). Instead, we have tried to make speaking, writing, and the arts an integral part of every course in the common curriculum. Faculty committees at colleges and universities in the United States, and also in

³⁶ See Kronman, *Education's End*, 118-19.

³⁷ See Jay Heinrichs, "Why Harvard Destroyed Rhetoric," *Harvard Magazine* (July–August 1995), 37–42.

Singapore, have written reports on the importance of teaching writing and oral expression, but few groups of faculty have had the chance to build articulate communication into the very foundation of a wholly new curriculum.³⁸ Some programs address this need through specially designed writing courses, such as the module in Writing and Critical Thinking in the University Scholars Programme at NUS. We have chosen, instead, to integrate an explicit concern with oral and written argumentation into all of our common curriculum courses.

The goal is not merely to hold more in-class debates or to offer more advice on writing coherent academic essays. The goal is for students to gain competence in a variety of practices, from carefully prepared formal speeches to explanations of experiments and extemporaneous responses to questions, from lengthy research papers to short creative assignments. While skills in academic essay writing will be developed as appropriate, our courses will provide deliberate instruction in other modes of communication, including technical reports and proposals, visual representations and interpretations of data, and persuasive writing of all sorts, from essays to blog posts. In designing modes of teaching, grading, and evaluation, we have taken seriously not only Socrates's statement that "an unexamined life is not worth living" but also the remark of his near-contemporary Isocrates, who wrote that, "the power to speak well is taken as the surest index of a sound understanding."³⁹

Ensuring that members of the college prioritize articulate communication is not only good for the health of the college community. Guaranteeing that students receive practice in articulate communication will also produce more tangible benefits. Academically, experts believe that such practice goes a long way toward greatly sharpening students' ability to fashion compelling arguments. There are few skills that will produce greater improvements in academic performance. Crafting persuasive arguments helps bring success in many careers, including law, research, business, medicine, and social or political work; the ability to confront unfamiliar material, voice one's views about it orally and in writing, and work with others through the medium of words, is almost universally prized.⁴⁰

38 See, e.g., Harvard University, *Report of the Committee on the Objectives of a General Education in a Free Society* (1945), <http://ia700300.us.archive.org/24/items/generaleducation032440mbp/generaleducation032440mbp.pdf>; Ministry of Education, Singapore, *Executive Summary, Report of the English Language Curriculum and Pedagogy Review* (October 2006), <http://www.tesol.edu.sg/pdf/MOE%20English%20Review.pdf>.

39 Plato, *The Apology of Socrates*, trans. D.F. Neville (London: F.E. Robinson & Co., 1901), 13; Isocrates, *Antidosis*, trans. George Norlin, *Isocrates*, vol. 2 (Harvard University Press, 1929; reprinted 1956), 327.

40 Khemani, "Why a Liberal Arts Education Matters."

Practice with articulate communication also prepares students to play influential and responsible roles in the various communities to which they will belong in their post-collegiate lives. Citizens and leaders have a responsibility to be able to relate their work to the projects and priorities of their local, national, regional, and global communities. The habits of public expression and conversation that college life helps to develop – both written and oral – are ones necessary to ensure that experts in various specialized fields can explain their expertise to their fellow citizens and attend to the way in which their research fits into the larger society.

Finally, it should be noted that emphasizing the importance of articulate communication throughout the College also has the effect of underlining the importance of *listening* and *judging*. Students will constantly be asked to respond carefully and critically to oral and written arguments of all kinds. As civil society in Singapore and elsewhere continues to grow more vibrant online and on the ground, the capacity of citizens to listen and read critically, to distinguish demagoguery from deliberation in the public sphere, is at least as crucial for citizenship as speaking and writing are.⁴¹ The easy availability of information and opinion in the Internet age makes the intellectual virtue of discernment all the more valuable. Without substantial practice in responding to the public expressions of a diverse group of people about many topics, students too easily succumb to the temptation to cherry-pick data and ideas according to their own preconceptions, hearing only what they would like to hear and listening only to like-minded sources. We think a diverse collegiate community of experts and novices in many fields, full of vibrant conversations about all sorts of topics, is an ideal place for students to learn habits of critical listening and judging.

Freedom of expression

The promise of an education built upon the exchange of arguments can only be fully realized if students and faculty can articulate their thoughts and express them to the various publics that make up the college community and its audiences. If thought and communication become divorced – if particular topics or arguments are regarded as off-limits for articulate communication, or if students and faculty fear that this may be the case – the unique merits of a liberal arts college will be compromised. For this reason, the inaugural Yale-NUS College faculty, in its first collective action, issued the following statement in the winter of 2012:

⁴¹ Nussbaum, *Not for Profit*, 26, 50; Delbanco, *College*, 33.

*We are firmly committed to the free expression of ideas in all forms—a central tenet of liberal arts education. There are no questions that cannot be asked, no answers that cannot be discussed and debated. This principle is a cornerstone of our institution.*⁴²

Instructors and students must judge for themselves the best manner in which to express their thoughts in various settings, determining the balance of sensitivity and provocation appropriate at any particular moment. We believe that learning to find this balance on a case-by-case basis is an important part of a liberal arts college experience, and that the College administration can best facilitate this experience not by instituting speech codes or restrictions, but instead by raising awareness of the powerful effects of insulting or hateful speech, by hosting open discussions of difficult cases, and by emphasizing the teaching of articulate communication.⁴³

⁴² Core Statement on Freedom of Expression by Yale-NUS Faculty, 12 December 2012, <http://yalenusblog.com/2012/12/12/core-statement-on-freedom-of-expression-by-yale-nus-faculty>.

⁴³ See Tan and Gopinathan, “Education Reform in Singapore.” This report from Singapore’s National Institute of Education recognized certain prerequisites of meaningful movement toward models of education likely to encourage creativity and innovation. See also the obstacles to earlier Chinese development of liberal arts models in Levin, “Top of the Class.”

4. A CAMPUS DESIGNED FOR CONVERSATION

ALTHOUGH THE FOCUS OF THIS DOCUMENT is the curriculum, it is important to take note of the crucial thought that has gone into the planning of the physical environment for the new college. The architecture of the Yale-NUS campus has been designed to facilitate the birth and growth of a community of learning. The same curriculum taught in a different space would struggle to produce the desired effects, since so much of the experience of a college education lies in its residential dimension. Class lectures and discussions provoke thought, but often the real education comes in the conversations that follow, in the dining halls, in the college courtyards, and in the residential suites late into the evening.

All students therefore will live on campus and participate in the college's dining plan. To explain the importance of this detail, Andrew Delbanco points to Samuel Eliot Morison's words about Harvard College:

*Book learning alone might be got by lectures and reading; but it was only by studying and disputing, eating and drinking, playing and praying as members of the same collegiate community, in close and constant association with each other and with their tutors, that the priceless gift of character could be imparted to young men.*⁴⁴

In *The Scarlet Letter*, Nathaniel Hawthorne offers a sense of what this interaction brings, noting, as Delbanco points out, that "it contributes greatly to a man's moral and intellectual health, to be brought into habits of companionship with individuals unlike himself, who care little for his pursuits, and whose sphere and abilities he must go out of himself to appreciate."⁴⁵

In the United States, colleges today try to ensure that their faculty and students represent a diverse population so as to bring about precisely this sort of interaction. One American observer stresses the importance of residential life in enhancing the understanding of difference among students as a key part of their education:

In a world where more than three-quarters of the students representative of distinct races and ethnic groups are educated in virtually segregated high schools, the formal curriculum will not likely replace the overarching need for common living experiences as a means of

⁴⁴ Delbanco, *College*, 42.

⁴⁵ *Ibid.*, 54.

*allowing students to engage fully with voices and histories distinct from their own. If ever undergraduate education needed a pedagogical model that recombined learning and life inside and outside the classroom, it is at this juncture in college history.*⁴⁶

Singaporean universities have grown steadily more international in their mix of students. In 2012 approximately 84,000 foreign students were studying there.⁴⁷ NUS reported that there were 11,699 international undergraduate and graduate students and students on exchange programs on campus during the 2011–2012 academic year, amidst a total student body of 33,008 students.⁴⁸ The residential college system at Yale-NUS will help to encourage at least a small part of this diverse population to know one another through the familiarity of residential life.

The residential colleges at Yale provide one powerful model for this sort of community, in which small groups of students are able to build relationships that transcend differences in race, economic class, and national origin. Yale-NUS College aims to bring together students from across Singapore, from the larger Asian region, and from Europe, Africa, Oceania, and the Americas, offering students an even more extensive diversity of voices and histories than institutions in the United States do. Within the residential community, interaction with students whose experiences run the gamut of cultural and economic backgrounds will be a key element of the Yale-NUS education.

The architecture of the residential colleges is designed to create a series of nested communities, one inside another. Students belong to a suite with roommates, to a block of suites sharing common space, to their residential college, to the College as a whole, to the much larger community of NUS, and to the broader society of Singapore. This organization, different from that found in the existing dormitories at NUS, provides an array of social interactions at different scales, offering a wide range of opportunities for personal development. The residential colleges will provide intimate interactions for faculty and students with a range of visitors and guest speakers, as well as offering a convenient setting in which faculty may organize student reading groups and activities outside the ordinary curriculum. The fellowship of the residential colleges also provides faculty with an opportunity to talk to and learn from each other, both about

46 Richard Guarasci and Grant H. Cornwell, *Democratic Education in an Age of Difference: Redefining Citizenship in Higher Education* (Jossey-Bass Publishers, 1997), 13.

47 Sandra Davie, “Foreign Student Numbers Drop Sharply after Climbing Steadily,” *The Straits Times*, 10 October 2012, <http://www.asiaone.com/News/Latest+News/Edvantage/Story/A1Story20121009-376559.html>.

48 National University of Singapore, *Towards a Better World: Annual Report 2012* (September 2012), 50, <http://www.nus.edu.sg/annualreport/2012>.

their scholarship and about pedagogy. Such conversations will help break down strong boundaries between disciplines of the sort that exist at many research universities and will foster scholarship and teaching that cross those boundaries.

To protect time for these human interactions, and more generally to promote depth of study, Yale-NUS has adopted a system that asks students to take four courses each semester, in contrast to the five modules that are ordinarily taken at NUS. This decision, taken early on, indicates the seriousness of our commitment to fostering deep reflection and conversation. To practice oral presentation takes time, so each course may need more space during the week. In addition, a less over-committed student schedule permits more time for the crucial interactions happening outside the classroom.

Of course the conversations will not always be about course work—at least, we hope that they will not. One aspect of collegiate life that this report does not treat, but that is part of its distinctiveness, is the extracurricular world of activities and sports. Athletics offers a chance to focus on the body as well as to build character, and morning yoga, afternoon squash, or weekend intramural team sports are often key parts of the collegiate experience. The importance of these activities should not be underestimated by academics focused on the life of the mind. Similarly, time at college is well spent seeing operas or dance performances for the first time, pursuing stories as student journalists, or crafting the look of a literary Web site. And intense work on community service and social projects designed to contribute to the broader community, and serious and passionate debates about political issues facing the world—all of which will be available at Yale-NUS—offer students opportunities to explore their ideals and put their commitments into practice. These experiences are not merely interesting or entertaining or politically worthwhile; they are also *educationally* valuable. We have tried to highlight the educational aspect of such activities in our attention to the “co-curriculum,” discussed in chapter nine.

Alumni of successful colleges often look back upon their experiences with the kind of nostalgia and fondness usually reserved for one’s childhood at home. If college represents, for many students, the moment at which they leave their formative family behind, it also comes to stand in as another sort of family. Students dine together several times each day and so develop the kind of familiarity that is usually associated with family life. They share their professional ambitions and anxieties with one another, and they are together during the intense hopes and disappointments of young people’s romantic lives. Living together, they are bound to turn to one another during difficult moments of personal loss or crisis. Just as a college provides its students a

starting point for an exploration of the vast range of human knowledge, so it also provides a starting point for the range of adult human experience. Among the goals of a college curriculum is to help students make sense of that experience together, through a set of conversations about some of the most fundamental questions and problems of human existence – conversations to which the content of their courses will not be irrelevant.

5. A COMMON CURRICULUM WORTH TALKING ABOUT

Offering more than breadth

THE MOST COMMON WAY of speaking about collegiate education divides student course work into two parts, one offering “breadth” and another providing “depth.” Educators are often much clearer about the meaning of “depth” than they are about the meaning of “breadth,” however. By depth, they generally mean the academic disciplines or interdisciplinary fields as they are taught and explored through the majors. Traditionally, colleges allow each discipline or program broad leeway in setting the requirements for its major, deferring to the internal standards appropriate to the field. Faculty from different majors rarely confer with one another about these requirements, except to try to infer what changes must be made to increase the number of students, who select their own majors. When interdisciplinary majors are established, the faculty members involved are usually granted autonomy about the content of the major. In fact, it is rare for the requirements of a major, whether disciplinary or interdisciplinary, to occasion much controversy outside the relevant departments and programs. By the time a major is established, there is a known community of judgment—the faculty in the department or program—that is assumed to have competence to set appropriate standards for achievement.

The situation is quite different when considering the “breadth” requirements, because there is no clear and shared understanding of what breadth means. Often, the term seems to mean little more than a smorgasbord of courses lying somewhere outside the student’s major. Yale-NUS College aims to provide a more coherent form of general education.

We therefore depart from the manner in which both of our parent institutions conceive of their breadth requirements. Like many American institutions today, Yale asks students to fulfill certain “distribution requirements.” Students are required to elect one or more courses in each of several categories. These categories are either “areas” (the humanities, the social sciences, and the natural sciences) or “skills” (writing, foreign languages, and quantitative reasoning). There are guidelines on what a course must contain to satisfy a particular requirement, but at Yale and many other institutions, many or most courses offered to undergraduates qualify to satisfy one or another of the distribution requirements.⁴⁹

49 For a description of the Yale College undergraduate curriculum, see <http://yalecollege.yale.edu/content/undergraduate-curriculum>.

NUS inherited from Singapore's colonial past a system that did not emphasize breadth requirements. A move away from that system began in the faculty of Business Administration, with the introduction of a semester-based modular system in 1993. In more recent times, the university has established a standard that each student should elect five courses outside the department or faculty in which he or she is enrolled, and departments and faculties have created additional course modules to serve such students. Currently the university requires courses in General Education, Singapore Studies, and Breadth, which are in turn categorized in different ways. In creating this three-part requirement with further subdivisions, NUS has moved toward an approach to general education similar in form to a distribution requirement.⁵⁰

One concern about a system of distribution requirements is that it creates a significant risk of incoherence in student course programs outside the major. At Yale there are literally thousands of courses to choose from, most of which could, in principle, be used to satisfy the distribution requirements. It can be difficult for students to structure a reasonable path through this maze of possibilities. If many students find their way reasonably well, that is in large part because they are helped by the power of campus traditions and customs, passed on from academic advisers and older students to younger ones. In addition, the culture in which many of the students were raised is one in which the outlines of a liberal arts education are well known. Students have an intuitive sense of what a well-rounded course program would look like. Virtually no guidance is given by the general education requirements themselves or by the course catalog, which offers more choice than counsel. Students coming into American colleges from abroad often report feeling lost in terms of course selection at the beginning.

Of course, one might respond that a good system of faculty advising is sufficient to deal with this problem and that the remaining potential for incoherence is a price worth paying in return for students' ability to exercise choice over their programs of study and thereby take ownership of their learning. There are, however, at least two additional problems that we see in systems of distribution requirements.

The first is that the range of courses typically available in each distribution category is so wide that it allows students to remain squarely within their comfort zones. We believe education is sometimes most effective when it is uncomfortable. In distribution systems, students tend to regard their breadth requirements as ones to be fulfilled in the easiest, most congenial way possible. They avoid precisely those challenges and opportunities for development that seem most difficult. Self-segregation is a result.

⁵⁰ For a description of the undergraduate curriculum structure at NUS, see <http://www.nus.edu.sg/registrar/edu/UG/curriculum.html>.

We see women's studies courses that include few male students, economics courses comprised only of students interested in business and finance, and introductory science courses full only of premedical students. We also see courses taken predominantly by athletes on a particular team, or by creative arts students, or by the members of specific social organizations. In the sciences, where humanities students often feel ill-equipped and uncomfortable, a few courses often develop a reputation as the easy way to fulfill the requirement, while other equally worthy courses acquire a different reputation, and are shunned by the students who would benefit most from them. Sometimes, courses with many students from outside the discipline are regarded as less serious, and so faculty may have incentives to "weed out" such students from their classes. In general, we feel that a distribution system makes it too easy for students to let themselves settle for what they are most comfortable with and to wall themselves off from some of the provocations that should come from a diverse set of peers and teachers.

We are impressed by the observation made by professors who teach in core programs about the potential for such programs to draw students into one intellectual community. As Andrew Delbanco writes when describing a benefit of Columbia University's Core, "once they have gone through the Core, no student is a complete stranger to any other."⁵¹ The assignment of students into small discussion sections will not track the social, class, or ethnic lines along which they might otherwise be tempted to segregate themselves. The tendency for students to group themselves on the basis of ethnicity, nationality, or first language affiliation, rightly identified by Martha Nussbaum as a habit that liberal education aims to disrupt, will be challenged by the practice of intense discussion in small groups across such dividing lines.⁵² A common curriculum promotes habits of thought and discussion that are valuable for living with others in a diverse modern society.

Second, in a system of distribution requirements, students fulfill the breadth requirement largely by taking courses drawn from the ordinary offerings of the various departments and programs. Such courses are usually designed, with the demands of a particular discipline in mind, as introductions. A true general education course, however, is not always best thought of as an introduction to a discipline. It may in fact be the last course a student will take in the area, in which case it should have educational goals different from those of an introduction for students in the major. What should the goals of general education courses be? We think that a collegiate community of learning is created in no small part through the faculty's deliberations about precisely this question.

⁵¹ Delbanco, *College*, 30.

⁵² Nussbaum, *Not for Profit*, 45.

A faculty that deliberates together about what to teach

The decision by the founders of Yale-NUS that all students at the College would devote a significant portion of their course work to one common curriculum, taught by teams of faculty, has major implications for faculty life as well as for students. It means that faculty must create a whole set of courses together, teach them together, and find ways of reviewing and revising them together.

Colleges that choose to encourage breadth of student course work through distribution requirements instead of a common (or core) curriculum do not require their faculty to collectively engage in this work. They presume, perhaps, that faculty will never be brought to agreement on the answers to such questions and that they cannot sufficiently relinquish the perspectives of their own research disciplines to ask about the whole of a student's education. Thus, courses arise almost entirely from individual faculty members' interests and senses of what is important for students to learn. Many faculty members in these settings offer broad courses designed to contribute to the general education of students and they take their responsibility to their institutions seriously; they do not treat courses merely as chances to elaborate their eccentric research agendas. Nevertheless, they do not have to deliberate together with their colleagues in a direct, concrete manner about precisely what students should learn. The breadth requirement therefore represents the sum of particular decisions by individual faculty members; it is not a statement by the faculty as a whole. This opens the door to faculty considering themselves primarily as free agents or entrepreneurs, rather than as members of a collegiate community of learning, an attitude that may have contributed to the gradual decay of effective faculty governance that observers of American collegiate education have noticed and often lamented.⁵³

Some schools have noted this problem but have tried to address it without adopting a core curriculum that all students must take. Harvard, for example, has a middling approach in which faculty members individually propose and construct courses outside the departments and programs, courses that are specifically designed for general education purposes. The general education courses are approved if they have certain features and are grouped under headings roughly comparable to the distribution areas required at other institutions. Students then choose any course they like under each heading. This system, while different from a distribution scheme in important ways, still allows general education to be crafted mainly by the choices of individual faculty members and students. Faculty members design the courses on their own and do not deliberate together about their contents. When Harvard recently tried to reform its

53 Delbanco, *College*, 90–92; Harvey C. Mansfield, “A More Demanding Curriculum” (2004), <http://isites.harvard.edu/fs/docs/icb.topic733185.files/Mansfield.pdf>.

program and appointed a committee to consider the substance of general education, the head of the committee confessed to the student newspaper how difficult the task was and how rarely the faculty ordinarily discuss such matters:

“Creating and instituting a new general education program tends to create . . . anxiety,” said English professor Louis Menand, who co-chaired the Gen Ed task force that wrote the curricular legislation. “One reason is that the general education program represents the Faculty’s collective judgment about what every students [sic] ought to know, and since professors are all trained in different disciplines, this can be a difficult conversation to have.”

“We are just not accustomed to thinking about education in general terms,” he continued. “It’s not our specialty.”⁵⁴

Faculty at Yale-NUS, we hope, will come to regard thinking about collegiate education in general terms as one of their specialties, and students will come to the College in part because faculty are interested in working together on just this project.

During the year prior to the College’s opening, the inaugural faculty has been intensely engaged in a deliberative process about its general education curriculum. In many institutions with traditional core curricula, the content of the common courses remains more or less fixed from year to year, the product of tradition rather than deliberations of the existing faculty. When founding a new college, however, the notion of a tradition has yet to be established, and the different models we might consult point in different directions. Columbia University’s Core Curriculum adopted one approach, Harvard University’s Program in General Education another; Seoul National University’s College of Liberal Studies tried one system, Waseda University another, and so on. The Yale-NUS faculty consulted these precedents but was not bound by them. They have had to bring their best individual judgments into conversation with the different views of their colleagues, working in interdisciplinary groups toward syllabi that reflect their collective sense of what would be best.

One striking feature of these conversations at Yale-NUS has been the importance of junior faculty members in the discussions. Although junior faculty at most universities design their own elective courses, they are not usually given much voice in the design of general education courses. Our working groups on common curriculum courses sought to draw upon both the wisdom of more experienced colleagues and the new ideas of younger professors. This has required an impressive willingness on the part

⁵⁴ Bonnie J. Kavoussi, “Admins Discuss Gen Ed Program,” *The Harvard Crimson*, 3 September 2009, <http://www.thecrimson.com/article/2009/9/3/admins-discuss-gen-ed-program-a>.

of the more established faculty to entertain new ideas and has encouraged a welcome boldness in the younger faculty; it has also helped to kindle deep intellectual friendships between ranks.

Unlike academic conferences on education and pedagogy that can end in unresolved debates, the process of developing a curriculum for a particular institution with plans to open on a particular date does not allow faculty to remain dogmatic in their views and content to be on one side of a debate. It asks them to deliberate together and endorse one concrete outcome, a syllabus, acceptable to all. The process of arguing about the syllabi has forced faculty to work across disciplinary and methodological boundaries that ordinary university life rarely calls into question. Biologists and physicists have had to come to some shared sense of what scientific inquiry is, and they have been pressed by historians of science and philosophers to put their understandings in theoretical and historical context. Economists and anthropologists have confronted the fractured landscape of the social sciences in efforts to devise courses on comparative social institutions and modern social thought. Quantitative reasoning became a surprisingly difficult battleground among scientists, social scientists, mathematicians, and computer scientists, while literary scholars and epistemologists have had their own version of the debate that Plato, in ancient Greece, referred to as the “old quarrel between philosophy and poetry.”⁵⁵ These conversations were not easy; often they were intense, as different methodological assumptions and conventions came into conflict. We have not shied away from such encounters; in fact, we have insisted upon them, with the hope that they would produce fresh insights and would help turn scholars into colleagues. We think that these arguments have done just that, and will continue to do so.

For a common curriculum to carry on encouraging true faculty deliberation, it will have to be subject to periodic review and renewal. The Yale-NUS faculty has committed itself in advance to reviewing the College’s common curriculum frequently, weighing the benefits of continuity and tradition in its deliberations but also the benefit of having the curriculum truly be a reflection of the faculty’s collective understanding. In a sense, the conversation about the curriculum will be ongoing, because our common curriculum courses will be taught by *teams* of faculty. Following a format that works well in Yale’s Directed Studies program, a small group of professors will take turns lecturing in each course, each speaking on an area of expertise or special interest to the whole class of students enrolled in the course and to the other faculty teaching the

⁵⁵ Plato, *The Republic*, Book X, 607(b), trans. Allan Bloom, *The Republic of Plato*, 2d ed. (Basic Books, 1968), 290.

course. Each professor on the team will also meet with a group of eighteen of these students twice each week. No member of the faculty will be an expert on every week's material in a common curriculum course, and so all will at some point or another lead seminar discussions with their groups of students on material outside their particular expertise. The faculty will therefore serve as a model for how to engage intelligently with material outside their specialties. They will also meet as a team each week to discuss the material and methods of teaching it. We try, in this way, to respond to the call for "faculty's corporate responsibility for the curriculum" that emerges often in discussions of collegiate education.⁵⁶

To view the common curriculum as a concrete centerpiece of deliberation for the faculty as a whole is to demonstrate that core courses need not be dismissed as musty remnants from previous centuries or outmoded surveys of irrelevant canons. On the contrary, a living, breathing common curriculum is a demonstration of a college's institutional commitment to fostering a functional community of scholars able to speak across disciplinary boundaries well enough to engage in meaningful common deliberation and willing to submit themselves and their disciplinary perspectives to the common needs of the college and its students.

*Challenges we faced in
designing our core courses*

In deliberating about the content of our common curriculum courses, we have found that several broad issues seem to arise in almost every course, in spite of the deep differences between their topics and modes of inquiry. First, we found ourselves quickly confronting the impossibility of comprehensively covering any field. We chose, in every case, to give students a smaller number of experiences in serious, deep inquiry instead. One way to think of this is that we chose *representation* over *coverage*—we aim to give students high-quality learning experiences. The Literature and Humanities courses in the first year, for instance, make no claim to cover all the greatest texts of world literature. How could they? Much more important, we have thought, is to provide exemplary experiences of what it is to read a complicated and deep text closely, to proceed from a superficial to a more nuanced understanding of a work of art, in a variety of genres and from a variety of cultural perspectives. In the Scientific Inquiry course we have similarly chosen to offer significant experiences in observational science, in laboratory science, in theoretical or computational modeling, and in mathematics as such, but the specific content of the unit will vary from year to year and will

⁵⁶ Project on Redefining the Meaning and Purpose of Baccalaureate Degrees (Association of American Colleges), *Integrity in the College Curriculum: A Report to the Academic Community: The Findings and Recommendations of the Project on Redefining the Meaning and Purpose of Baccalaureate Degrees* (1985), 38, cited in Kimball, *Orators and Philosophers*, 240.

make no effort to cover all relevant material. And in the social sciences we have crafted a new kind of core course organized around problems rather than disciplines, allowing us to avoid the temptation to try to cover traditional fields.

Thinking in terms of representation rather than coverage allowed us to compile for each common curriculum course a storehouse of possible units much larger than what could be taught in a single semester. The final choice of what would be taught in the course each year then depends not only on a judgment about the intrinsic importance of each unit – there are many more units worth teaching than we can teach – but also on considerations of pedagogical coherence and the interests of the faculty teaching that year. This approach should reduce the sense that the courses are insisting on a particular canon and allow a degree of continuous evolution in their syllabi. Every year, a somewhat different set of faculty teaching the course will review the successes and difficulties encountered in previous years, add new items to the storehouse of possible units, and reexamine the question of what in particular will be taught that year. Of course some units will be taught again and again – otherwise the common curriculum would not be “common” among different years of students and faculty. But the courses will also evolve as new scholarship and topics of interest emerge, and as new faculty join the team. This will serve to keep the course fresh and allow change to happen in an incremental fashion, rather than requiring a comprehensive full-up review of the course with the attendant fierce battles over what is and is not included.

A second issue that arose in the discussions of our various common curriculum course working groups was the question of how to juxtapose different disciplines and cultural contexts in such a way that comparisons between them are made manifest, while at the same time ensuring that the internal integrity of each discipline or culture was maintained. Thus in the humanities we want to bring different cultures into conversation, but also to understand each on its own terms; in the social and natural sciences we want to display how disciplines can approach the same problem from different perspectives without losing the power that comes from focusing on one perspective at a time.⁵⁷

Three distinct approaches to this quandary emerged from our deliberations. First, one could simply divide each common curriculum course into *monolithic* units on several different topics, each largely independent of the others, though perhaps with a bit of discussion of how they interact at the edges. This monolithic approach clearly

⁵⁷ Stephen G. Salkever and Michael Nylan, “Comparative Political Philosophy and Liberal Education: ‘Looking for Friends in History,’” *PS: Political Science & Politics* 27, no. 2 (June 1994): 238–47.

maintains the integrity of each area, but does not necessarily encourage thought and discussion of how the areas might interact. Second, there is a *dialogic* approach, in which a number of primary topics are studied in some depth, but each one is followed by one or more responses from other disciplines or cultures as counterpoints. This has the advantage of modeling substantive dialogue across cultural or disciplinary boundaries, but the potential defect of confusing students with critical perspectives before they have developed their own understandings of the primary topics. Third, a *thematic* approach offers a set of broad themes, such as “justice” in philosophy or “energy” in science, picking out approaches to that theme from a variety of cultures or disciplines. This promotes thematic coherence but risks denying students the experience of immersing themselves in particular cultures or disciplines and learning their coherence from the inside; it also risks imposing the professor’s thematic priorities and terminology on material rather than allowing the material to speak on its own terms. We found it helpful to identify these alternatives, each with its own benefits and liabilities, and have incorporated parts of each in our various common curriculum courses.

A third challenge that all common curriculum courses face to some extent is the relation between their content and the preparation required for particular majors. We decided early on that the common curriculum courses at Yale-NUS should not be governed by the needs of particular majors. It is true that a large fraction of our students’ first two years of study is to be spent on the common curriculum, and therefore that these courses necessarily will serve as background to the various majors. But we did not construct them as exploratory tours of possible majors or as methodological introductions to the disciplines. Instead, to ensure that students would be ready for sophisticated work in the majors by their third year, we created a supplementary group of courses that offer a bridge from the common curriculum to the majors. This was particularly important for majors that are cumulative in nature, as in the sciences and economics. These bridge courses can be designed, and if necessary redesigned, to incorporate whatever basic material is deemed necessary as prerequisite to the major, but happened not to find its way into a particular common curriculum course. In this way we can protect the common curriculum courses from being colonized by the needs of particular majors and prevent them from being reduced to compromises among different disciplines about what students need to know to enter their fields.

Finally, we grappled with the problem of instructor autonomy. Although team teaching and interdisciplinary deliberation are key components of this common curriculum, we have found that we are most successful when we also protect space for significant autonomy in the way that individual instructors approach the common material, and even in which supplementary material they bring into each course. As noted above, our structure generally involves a team of faculty teaching each course, with common

lectures each week but each professor running his or her own discussion seminar twice a week on the material. Those seminars, and the writing and speaking assignments associated with them, should allow faculty to adopt an approach to the material that they feel comfortable with. This means that syllabi should be composed not with a particular ideological and methodological approach in mind, but instead with the goal of including rich material that can be approached from many vantage points. This was, in our view, an argument for basing humanities courses on texts that have been read in many ways by many different sorts of readers over a long period of time.

Guiding considerations for a new generation of core courses

The desire to study something in common does not offer an answer to the question of what should be studied. Nor, we think, does the oft-repeated injunction to teach “critical thinking” provide enough guidance. Sometimes language about giving students “early exposure” to multiple disciplines crept into our discussions, as it does in the University of Tokyo’s explanation of its liberal arts curriculum, but we feel that relying on that way of understanding general education risks subordinating it to the disciplines, since it may be viewed merely as a trial run at various majors.⁵⁸

In deliberating about what to include and navigating the challenges described above, we allowed ourselves to be guided by five broad considerations, each of which is relevant to more than one part of the common curriculum:

Fundamental questions of human experience

First and foremost, we have not shied away from identifying certain questions and problems as fundamental to any serious thinking about human experience. Of course different traditions may emphasize different perspectives, but certain questions arise in some form to any reflective human being: What causes natural phenomena to occur? To what extent can I trust my senses? What is the best response to human emotions such as fear and anger? How should children be protected and raised? How can words, images, or melodies capture especially striking moments of human experience? What form of living together is best, or best for us? To what extent can natural processes be controlled, and how, and to what purposes? Are there forms of intelligence other than human in the universe? What, if anything, gives a human life importance and meaning?

A common curriculum that offered shared reference points and sparked conversations but that neglected questions such as the ones listed above is not satisfactory, in our view. Our responsibility is to offer not merely breadth or diversity of knowledge and approaches to knowledge; we do not put much value on broad but shallow learning.

⁵⁸ Ito, “Liberal Arts Education.”

We aim, instead, to give *depth* to the breadth we offer. A common curriculum should give young adults language with which to articulate and navigate the deepest dilemmas of human existence.⁵⁹

Great works as incitement to self-examination

Even a quick glance at our syllabi in the humanities will reveal that while we did reevaluate the many possible approaches to a common curriculum in literature and philosophy, we have not left the “great works” approach behind. It is easy to dismiss the traditional great books as crusty with tradition – until you sit down and read them. The fact of the matter is that many students and faculty continue to experience the close reading of certain canonical texts as revelatory. A course of great works “slakes the human craving for contact with works of art that somehow register one’s own longings and yet exceed what one has been able to articulate by and for oneself.”⁶⁰ Which books, however, are most likely to articulate “one’s own longings”? Many of the works we read in our courses have proven their ability to resonate with readers from an astonishing variety of times and places, and we expect them to do so in Singapore as well. To some extent, however, the resonance of a work may also depend on the culture that a particular student body is most likely to feel at home in. One powerful argument for Western students beginning with great texts of the Western tradition is that those students have, whether they realize it or not, been shaped by the culture emerging out of these works, so that in reading them they are engaged in a work of self-exploration; the same logic applies to students from cultures shaped by Confucianism reading Confucius and debates about its interpretation, for example. There is a danger of reifying a particular understanding of a culture or tradition, but there is also a danger of denying our own historicity, of ignoring the fact that we live among institutions, cultures, and norms that have emerged in a particular way. Studying a “heritage,” in the old-fashioned language of the Harvard Red Book, need not be mainly about transmitting or implanting a particular set of values; it can instead be about better understanding our culturally specific intuitions and so better understanding ourselves.⁶¹ Today, one feature of ourselves that can hardly be ignored is our *modernity*. To study the question of what modernity is – to ask about its promises and its pitfalls, and about the different manifestations of it and responses to it in different places – is to ask questions with profound personal meaning for people from a whole variety of backgrounds.

59 Kronman, *Education’s End*, 41.

60 Delbanco, *College*, 32. See also Nannerl O. Keohane, “The Liberal Arts and Presidential Leadership” (remarks to the Council of Independent Colleges Presidential Institute, 4 January 2012).

61 Harvard University, *Report of the Committee on the Objectives of a General Education*, 41–51.

Of course the number of works that has shaped even one culture, much less all of modernity, far exceeds the number that can be studied well in any course, so no syllabus is fully determined by this criterion. Still, we think that education should begin close to home, even if it aims to end far away. In both the United States and Singapore, migration patterns and newly recognized forms of diversity make the question of what counts as “home” complicated enough. In the globalized context of Yale-NUS College, the question of what “home” is becomes much more difficult, and the challenge faced by the humanistic and comparative parts of the common curriculum is therefore all the more intense.

Beyond East and West: cultural kaleidoscopes and dialogues

The question of how to understand and compare cultural traditions is a live one in many disciplines of the humanities and social sciences, and it is an issue that has dominated our deliberations about some of our common curriculum courses. In designing our courses, we have been especially cognizant of the danger of treating cultures or civilizations as fixed and coherent wholes and thereby contributing to caricatures already too common in the popular imagination. We cannot teach the whole of “Chinese thought” (much less “Asian thought,” whatever that might be), any more than we can adequately capture “European thought”; we certainly would not want to pit these traditions against one another in an intellectual clash of civilizations. Nevertheless, it would also be a mistake to give up on the commonsense aspiration to create a continual dialogue across civilizations. In the end, we hope our students will move beyond thoughts of a simple East-West axis to appreciate the whole “kaleidoscope” of intersecting influences and readings that make up any real experience of reading broadly and reflectively.⁶²

A humanities module in literature from a typical liberal arts college in the United States might tackle a genre such as *epic* with primary reference to authors such as Homer, Virgil, and Milton. At Yale-NUS College, a course that tackles epic will read *The Odyssey* and the *Ramayana* and *Gilgamesh* in a context not confined to the canon of any one civilization, looking out also for ways in which readers in one culture have read works in another. At the same time, it will not ignore the variation in what it is to be an epic in different times and places – the different production and reception histories, and the different contexts. Likewise, if a unit in a Literature and Humanities course is devoted to a comparative reading of cultural productions united around a theme or a period in human history, students will encounter a wide range of artifacts:

62 Margaret Litvin, *Hamlet's Arab Journey: Shakespeare's Prince and Nasser's Ghost* (Princeton University Press, 2011), 6–7.

for example, the verse form of the *ghazal*, which links the cultures of several languages from Arabia to India, will be studied for its contrast with the tone and style of the Petrarchan sonnet from Europe and its links to the formal intricacies that align poetry and calligraphy from Middle Eastern cultures with other forms of pattern making, from carpets and tapestries to architectural embellishments. Likewise, the modernity spoken of by Charles Baudelaire in “The Painter of Modern Life” as a mix of the transitory, the exciting, and the disconcerting will be linked to the rise of industrial urbanism, the growth of Empire, the motif of the nightmare in modern art (as in Edvard Munch’s *Scream*), and the connections between all these and the allure of the exotic, as in the *Japonisme* of J. M. Whistler or the primitivisms of Paul Gauguin and Pablo Picasso, whose works can be compared with the finest products of the *ukiyo-e* tradition of Japanese woodblock prints, or the traditions of wood and bone carving from the South Sea islands and Central Africa.

A course in philosophy might look at the development of ethical thought in a context that compares the Stoics from ancient Greece with the discourse of Krishna from the *Bhagavad Gita*, the Madhyamaka Buddhism of Santideva, and the neo-Confucianism of Zhu Xi from China. And when a unit in the social sciences asks about the structure and function of family, it is able to draw on conventions of comparative thinking to ensure that this question is answered with reference to a number of cultural and historical contexts.

In bringing disparate works and traditions into dialogue with one another, there is a real danger of unwittingly giving one frame of reference priority over others by accepting its categories and then looking for comparable examples in other cultures or times. Some observers have responded to this worry by shying away from comparison altogether, but we believe that it is possible to be reflective about comparisons, and we aim for “comparison without hegemony.”⁶³

We also recognize, however, the danger of a superficial cosmopolitanism that leaves students with little appreciation for the internal logic and complexity of particular trains of thought and influence. The world’s literatures, religions, and philosophies are not merely menus from which we can select our favorite lines to concoct a comforting feast. Confucius, Buddha, and Socrates may all have been part of an “axial age,” but the traditions of interpretation surrounding each were quite distinct, and bringing them

63 Sheldon Pollock, “Comparison without Hegemony,” in *The Benefit of Broad Horizons: Intellectual and Institutional Preconditions for a Global Social Science*, ed. Hans Joas and Barbro Klein (Koninklijke Brill NV, 2010), 185–204, http://www.columbia.edu/cu/mesaas/faculty/directory/pollock_pub/Comparison%20Without%20Hegemony.pdf; see also Salkever and Nylan, “Comparative Political Philosophy and Liberal Education.”

into too easy a relation with one another would not do justice to the genuine difference and strangeness that a person raised primarily under the influence of one should feel when confronting another. We have found that historians play a key role in facilitating our appreciation of these complexities. Our historians have been spread out among several different working groups on common curriculum courses in literature and in philosophy and political thought, and they have helped us to contextualize the various works we are reading. It would be best if we could also demonstrate the importance of linguistic differences, a challenge that our common curriculum courses, all in translation, have not yet adequately addressed. One task that remains for future iterations of our curriculum is to address more satisfactorily the place of language training in our curriculum. Still, we believe that sensitive attention to the issue of translation in the classroom can at least raise key questions for the students and point to the importance of the fact that each work comes from a particular place.

The best response to a concern about reifying traditions and civilizations, we believe, is deep engagement with particular works, thinkers, and histories, as well as forms of social analysis that are sensitive to the importance of context. A work of literature or theory does not speak for whole peoples or places or eras; each work speaks on its own. Any point in space and time is the center of its own world, and a writer, scientist, or artist looks out from that spot with a unique perspective on his or her own canon of classics, with a distinctive understanding of history, and within a particular horizon of meaning. An education that aims to succeed in linking students from all over the globe, such as that offered by Yale-NUS College, must not try merely to “expose” them to a variety of viewpoints. More deeply, it should aim to give them the experience of coming to know a small number of particular perspectives well, with a hint of the inner complexity and dynamics of each. Then it should provide space for students to begin to bring these different perspectives into contact with one another, at times showing them examples of previous dialogues across linguistic and cultural boundaries, at times simply making them aware of their own status as readers who can create such a dialogue themselves. Giving students a taste for the difficult and worthwhile task of genuine interpretive engagement is a demanding but plausible goal, and one that will help to bring a diverse international body of students and faculty together into one community of learning.⁶⁴ Only after developing relatively deep understandings are students ready for the difficult and important work of discerning among them.

64 Leigh Kathryn Jenco, “‘What Does Heaven Ever Say?’ A Methods-centered Approach to Cross-cultural Engagement,” *American Political Science Review* 101, no. 4 (November 2007): 741–55. See also Salkever and Nylan, “Comparative Political Philosophy and Liberal Education” and Litvin, *Hamlet’s Arab Journey*.

Integrating the sciences and quantitative reasoning into a common curriculum

Most core curricula in the United States focus primarily on the humanities. In a few cases, most notably St. John's College, a great books approach extends to the social sciences and sciences as well. Normally, however, students who are interested in learning something about social sciences such as economics and psychology turn to the introductory courses in the field, which serve both majors and large numbers of other students. In the natural sciences, introductory courses to the various fields sometimes act as premedical courses, but do not usually serve general education purposes. Instead, a different set of courses is set up to expose "nonscientists" to science and thus satisfy distribution requirements. For reasons already explained, we do not believe that these patterns of enrollment create the best learning experience for all students. We think that a common experience in the social and natural sciences is possible and will be beneficial to students and faculty for the same general reasons that it is in the humanities.

Education in science and mathematics is too often imagined in purely utilitarian terms. The benefits of new technology are so impressive, so ubiquitous, and so promising that it is sometimes hard to remember that science is not merely a tool to generate new technology, but a powerful and fascinating intellectual endeavor in its own right. All human beings, from their earliest days, think scientifically in a broad sense. We wonder how the world works; we infer models from observed patterns and make predictions based on those models; we love solving puzzles. Improving our competence at these natural modes of thought and learning more sophisticated methods of testing our intuitions against empirical evidence offer enormous intellectual satisfaction. This natural human joy in understanding the natural and social world is augmented by the immense impact that scientific knowledge can have on our ability to solve practical problems in the world, from issues related to health and the environment to problems of social and political organization.

The character of modern science and the sociology of scientific practice have nevertheless produced a tension between science and the humanities, a tension described most famously in C.P. Snow's discussion of the "Two Cultures," in which he laments the division of intellectual life in mid-twentieth-century Britain into a culture of the arts and humanities and a culture of science and technology that speak at cross purposes to each other.⁶⁵ The separation of cultures that Snow described can be seen clearly at both Yale and NUS. At Yale, science facilities are geographically separated from the central campus, sharing an area known as "Science Hill," which is perceived by under-

65 C.P. Snow, "The Rede Lecture, 1959," in *The Two Cultures, and A Second Look* (Cambridge University Press, 1964), 1–21.

graduates to be set apart from their ordinary lives as students. As one student put it in response to a survey of undergraduate attitudes toward the science curriculum, “I am not the kind of person who takes a course on Science Hill.” At NUS, the situation is even more extreme, in that the Faculty of Science is institutionally separate from the Faculty of Arts and Social Sciences; students must decide at the time of their application to the university whether or not they intend to study science seriously. In Singapore generally (and neighboring Malaysia) the division arises sooner, since the drive to modernity has fostered a school system in which students are “streamed” from early in their school careers into subjects such as Science or the Arts, depending on the abilities they show in school in tackling subjects like Mathematics, Physics, or Chemistry. One part of what the liberal education model will attempt in Singapore is to heal such rifts and divisions.

The sciences were not always so separate from the liberal arts. The roots of liberal education include, among other influences, the medieval *quadrivium*, a set of fields that included astronomy, arithmetic, and geometry alongside music. Well into the nineteenth century, science was known as “natural philosophy,” a term that emphasizes the connection between the sciences and the humanities. In the twentieth century, the philosopher and educator John Dewey argued for the inclusion of the sciences and other emerging forms of expertise in a liberal arts setting:

The problem of securing to the liberal arts college its due function in democratic society is that of seeing to it that the technical subjects which are now socially necessary acquire a humane direction. There is nothing in them which is “inherently” exclusive; but they cannot be liberating if they are cut off from their humane sources and inspiration.⁶⁶

Incorporating the sciences into a common curriculum was for Dewey both a way of insuring that students feel equipped to understand an influential mode of thinking in modern society and of asking scientists to think about how their activities and findings fit into the contours of human life. This goal can only be achieved if scientists and nonscientists come together in substantive conversation, which requires each to have sufficient understanding of the other’s way of thinking.

In practice, however, how can students with very different levels of previous experience in science usefully take a common course on science? We believe that a course that focuses on science as a *mode of inquiry* can successfully bring them together in a

66 John Dewey, “The Problem of the Liberal Arts College,” *The American Scholar* 13, no. 4 (Autumn 1944): 393 (emphasis in original).

nontrivial manner. A great deal of secondary education in science is devoted to facts and techniques, so even students who have focused on science will have much to learn in studying how scientific theories arise, change, and sometimes are discarded. Students who do not intend to focus on science will emerge from such a course with a better sense of the power and limitations of the wide range of new scientific knowledge that will doubtless be uncovered in their lifetimes. The conversation that such a course will produce will help to humanize scientific understanding by focusing attention on the human activities through which new scientific facts are uncovered and established, rather than on memorization of the facts themselves. Our course on scientific inquiry includes moments of significant contact with our course on philosophy and political thought, to bring the character of scientific inquiry into relief through comparison with earlier and different modes of inquiry.

However, a study of modes of inquiry alone did not seem to provide sufficient training in science for the modern era. We felt it important to explore with some specificity the “furniture” of modern science, the substantive knowledge and techniques that are being developed. Thus we have created courses beyond the initial course on Scientific Inquiry that we hope will provide a comprehensive foundation in science for all our students. Here, however, we felt that the differences in preparation between those students who focused on science in their secondary education and those who did not might be insuperable. In addition, there seemed to be critical differences in content that would be appropriate between those students for whom this might be their last formal engagement with science and those who would most likely continue its study throughout their college careers. So we, somewhat reluctantly, split the final part of the science “common” curriculum into two tracks: Foundations of Science provides a two-semester introduction for second-year students who do not have extensive preparation in science, with an emphasis on applicable ideas associated with energy and the environment, while Integrated Science provides an interdisciplinary approach to science for those students with more extensive preparation. We note that we have not left the ideals of the common curriculum behind in designing these courses: Foundations of Science will be a rigorous introduction that builds the capabilities of students throughout a full year, so that they will not only emerge with information that they may not previously have known, but also with skills and confidence in scientific areas that have been developed and nurtured over time. Integrated Science is not conceived of as an introduction to the science majors, but as a self-contained integrated course—there may well be introductory material required for science majors that does not fit into this course, and it is for this reason that the “bridge” courses are being devised.

The spread of scientific and statistical forms of inquiry into the investigation of social phenomena, in the social sciences, has introduced an additional set of pedagogical

challenges. Social and political issues attract a great deal of attention from students, so introductory courses in particular social science disciplines are often large. Students tend to receive the view of only one social science discipline at a time, however. One could imagine constructing a common curriculum course in the social sciences by simply assigning a few weeks to each social science discipline, from economics to anthropology, but we are seeking a more integrated approach, less respectful of disciplinary boundaries. We focus less on the methodologies and more on the problems they are intended to address and the social institutions and phenomena they are designed to study. Each unit in the syllabus calls forth approaches taken from a variety of disciplines that illuminate different issues. Combining a number of such topics will lead to an experience in the social sciences that prepares students to incorporate a wide range of approaches to particular problems, as they are likely to be called upon to do as citizens and leaders.

One shared characteristic of today's natural and social sciences is their reliance on increasingly sophisticated forms of mathematical analysis. We have therefore included a course on quantitative reasoning very early in the common curriculum, regarding it as foundational for all students. The innovative course that our faculty has developed begins with the fundamental question of what should persuade us that an assertion is true. It then examines the role that quantitative, and especially statistical, argument can play in such persuasion. Mathematicians, scientists, and social scientists have all been involved in the creation of the course, so that students leave with a sense of how to think about different types of argumentation, from logical proof to various sorts of probabilistic thinking.

Since the study of social problems is especially interesting to many students, the course on quantitative reasoning will make a special effort to use examples for the social sciences. However, social phenomena also pose challenges for quantitative analysis. We have decided to take this as an opportunity to explore questions about data collection and biases in research design and statistical analysis, and in presentation of results. Understanding such biases is a particularly important skill in understanding the world and in determining how to evaluate the advice of experts. In the modern world especially, the ability to critically understand quantitative reasoning is a crucial part of the practical judgment that responsible citizenship requires. We acknowledge this fact by including a course on quantitative reasoning in the common curriculum, and we ask students to reflect on its historical and theoretical origin in the second-year common curriculum course on Modern Social Thought.

General education that matures with the students

The common curriculum at Yale-NUS College is not a set of merely introductory requirements to swim through and leave behind on the way to the more serious study of the major. The common curriculum takes up the largest proportion of course work in the first two years, but it continues through all four years. We have already noted that the sequences of science courses allow for more advancement, even among non-scientists, than courses fulfilling a distributional requirement would, since later parts of the common curriculum can build upon earlier parts. This is not only true in the sciences, but also throughout the common curriculum. A second-year course in Modern Social Thought can assume that students have spent time grappling with Plato, Hobbes and Rousseau, Confucianism and neo-Confucianism, Taoism and Buddhism, as well as modern approaches to psychology, economics, political science, anthropology, and sociology. By the third year, students are focusing on their majors but also continue their general education by selecting from menus of “historical immersion” and “current issue” courses, each of which asks students to draw from multiple perspectives and disciplines as they study in depth a particular moment in the past and a particular problem in the present. At this point, instructors have the luxury of teaching students who have studied all the topics mentioned above, as well as three full terms of science, and more. A general education program that continues throughout all four years of college can change its character to reflect the growing maturity and sophistication, as well as the powerful set of shared references and knowledge, that the students have acquired.

6. A COLLEGIATE APPROACH TO THE ACADEMIC DISCIPLINES

DISCIPLINARY ACADEMIC RESEARCH poses a fundamental challenge to the liberal arts college; we deceive ourselves if we pretend otherwise. When Yale published its influential *Reports* in 1828, articulating the case for preserving a traditional approach to collegiate education, it did not even mention among the many goals of a liberal education the ambition to pursue an increase in human knowledge.⁶⁷ This is not surprising. Any historical account must recognize that the great intellectual progress of early modern Europe took place, for the most part, outside the universities and colleges. Independent researchers and associations such as the Royal Society in England and the American Philosophical Society in the colonial United States brought amateur natural philosophers (scientists) into contact with one another without constricting their activities in the way that college or university life would have. “[T]he real business of enlightened thinking,” writes Bruce Kimball, “took place outside of the educational institutions.”⁶⁸ As John Dewey remarked in a lecture on liberal arts colleges, “scientific studies made their way into the college against the resistance of entrenched orthodoxy because of their growing importance in the conduct of social affairs, not because of intrinsic love of scientific knowledge - much less because of wide-spread devotion to scientific method.”⁶⁹ A glance at the history of enlightenment thought demonstrates that the independent thinkers of early modernity, who planted the seeds of the modern research ideal, regarded the closed and cloistered traditional world of the colleges – the monasteries of medieval scholasticism – as the enemies of free thought. This was partly because of the influence of ecclesiastical institutions, but not entirely. It was also because the demands of a close community themselves mitigate against the romantic individuality that characterizes the research ideal.

When the German university model came to America in the late nineteenth century, higher education institutions had to adapt. A statement by the first President of Johns Hopkins, an institution founded, like Stanford, with the research university ideal in mind, states the goal forthrightly: Daniel Coit Gilman said that the new institution’s

67 David B. Potts, *Liberal Education for a Land of Colleges: Yale’s Reports of 1828* (Palgrave Macmillan, 2010); Kimball, *Orators and Philosophers*, 150–51.

68 Kimball, *Orators and Philosophers*, 136.

69 Dewey, “The Problem of the Liberal Arts College,” 392.

goal should be to show students “how to extend, even by minute accretions, the realm of knowledge.”⁷⁰ As college teaching came to be dominated by faculty trained in Ph.D. research, the nature of the collegiate classroom changed to reflect a new emphasis on disciplinary divisions. Faculty were divided into departments reflecting disciplinary communities and came to feel more allegiance to those communities than to the college as a whole, and student education in a particular discipline was elevated as the most serious aspect of collegiate study. Gradually, the senior year capstone experience was transformed from study together of a broad topic meant to tie all that had been learned into a coherent whole to a much more individualized and advanced research project in a particular discipline, designed to allow each student to produce, in some small way, a distinct piece of original knowledge, a sort of preparatory foray into the world of dissertation research.⁷¹

Today the rhetoric about liberal arts colleges is full of talk about the happy marriage between research and teaching, but the relationship is in fact difficult to manage well. The difficulty lies not simply in how much time faculty devote to each activity, a challenge that might be met by teaching the topics one researches and involving students in research activities earlier. The deeper problem concerns a faculty member’s understanding of the *community of judgment* to which he or she belongs. For the standards and norms that a research discipline wields will always be different—more precise and more abstruse—than the standards appropriate for a more general audience of collegiate peers. Part of the work faced by a member of a college faculty is to find a way of belonging meaningfully to both communities at once. Given the pull of the disciplinary identity, the more difficult part of the challenge is to strengthen the collegiate community and make it attractive as an equal partner in a faculty member’s professional life.

*No to departments,
yes to majors*

Yale-NUS College has approached this problem by taking a step that has been recommended and imagined more often than actually tried. We decline to institutionalize faculty within departments representing the academic disciplines. In the absence of departments, divisional directors for the humanities, social sciences, and sciences will handle various administrative matters, but the fundamental communal identity for the faculty will be the College as a whole. The size of the College, aspiring to approximately 100 faculty members at full strength, makes this a reasonable goal. Of course smaller groupings of faculty will work together on various projects, from common

⁷⁰ Quoted in Delbanco, *College*, 93.

⁷¹ Kronman, *Educations’s End*, 54–55.

curriculum courses to majors to various activities, excursions and co-curricular projects. The variety of these projects, however, should prevent any one of them from emerging as a permanent partial society within the whole.

We believe that the association of majors with disciplinary departments can lead to undergraduate majors being understood as junior versions of graduate programs, with strong emphasis placed on developing the skills necessary for conducting scholarship in that particular field. While the research experience is important, and in our view a necessary part of an undergraduate education, it is nevertheless true that in most fields the vast majority of undergraduate majors will not go on to further study in that field, but rather will carry their experiences and understanding into other walks of life. Thus the emphasis placed on preparing students for graduate study, and for inculcating the habits of mind necessary for such study, is not always well considered.

Many systems of higher education require that students select their major field of study upon application to the undergraduate program – that is, students apply for the express purpose of pursuing a particular course of study in a particular discipline. In liberal arts institutions, students generally apply to the college and select their major later. This would seem to provide students at institutions that start specific course work in the major right away with an advantage, in that a larger number of courses associated with the major can be completed during the undergraduate program. However, at the graduate level it is not at all evident that this is an advantage. In the United States it is clear that liberal arts colleges, where majors generally start relatively late in the program, provide a disproportionate share of successful graduate students in the sciences.⁷² This may be because students who are allowed the leeway to change their focus arrive in majors more attuned to their talents and passions than students who are required to select their major field before they start their undergraduate education. The evidence suggests that in many cases the maturity and breadth acquired by students who are allowed to select their majors more than compensates for the time and effort they spend pursuing breadth requirements and electives. A representative of the University of Tokyo recently argued in favor of a system of “delayed specialization” and “early exposure” (to various disciplines), to allow more choice and maturity.⁷³

It is true that a more radical commitment to a traditional collegiate identity might have recommended eliminating majors as well as departments, as the University of Chicago

72 Joan Burrelli, Alan Rapoport, and Rolf Lehming, “Baccalaureate Origins of Science and Engineering Doctorate Recipients,” *InfoBrief* (National Science Foundation, no. 08-311, July 2008), 2–3, <http://www.nsf.gov/statistics/infbrief/nsfo8311>.

73 Ito, “Liberal Arts Education.”

briefly did.⁷⁴ We, however, want to take a different path and show how collegiate education can take advantage of the energy, creativity, and individuality of research – we want to embrace the major as an inherently valuable aspect of collegiate liberal arts education and demonstrate that it need not act as a centrifugal force pulling the community of learning apart, but can instead be integrated into that community and make it stronger. We agree, then, with the aspiration voiced by Boyer: “Rather than view the major as competing with general education, we are convinced that these two essential parts of the baccalaureate program should be intertwined.”⁷⁵

We retain the major because we believe that developing a sophisticated understanding of a particular discipline is valuable not merely as training for a future in the field, but also in its own right as a formative intellectual experience. Developing deep expertise in a particular area is a new goal for most undergraduates, and represents a kind of learning and thinking that contributes to their intellectual competence and confidence. They learn what it is to know a field in all its complexity, and also, by implication, they may come away with a sense of humility about fields they have not mastered. Studying a particular intellectual passion at a level deep enough to appreciate the current research frontiers of the field, and having the opportunity to contribute to the development of that field, is also a source of great personal satisfaction and self-confidence, and provides students with the basis for real achievements in future endeavors.

Rethinking the majors

Having declined to organize ourselves by departments, we have considerably greater freedom to consider what an undergraduate major ought to be than most institutions do. Such rethinking is necessary if the in-depth study of a particular field is to serve the goals of liberal education. Studies have shown that student efforts within the majors at existing universities have sometimes not only failed to advance these goals, but actually caused movement backward with respect to them. According to Derek Bok, some majors are even “linked to declines in writing...and other important aims of a rounded liberal education.”⁷⁶ Faculty developing majors at Yale-NUS have considered not only how to train students to a high level so that they will be attractive to graduate schools and employers, but also how the goals of the major can be integrated with the goals of the college as a whole.

In thinking about this, it appears to us that majors ought to be a bit more broadly defined than they typically are, in several directions. First, there are some departmen-

⁷⁴ Kimball, *Orators and Philosophers*, 212.

⁷⁵ Ernest L. Boyer, *College: The Undergraduate Experience in America* (Perennial Library, 1988), 110.

⁷⁶ Derek Bok, *Our Underachieving Colleges: A Candid Look at How Much Students Learn and Why They Should Be Learning More* (Princeton University Press, 2006), 143.

tal majors that are sufficiently close to one another that at least some of their courses and other activities could usefully overlap – examples include different national literatures (English, French, Chinese and so on, as well as majors designated as Comparative Literature); and clusters of science fields (e.g., Physics, Astronomy, Geology, and the various flavors of Biology, which are often provided with separate majors). Second, there is some advantage in defining majors broadly enough that different tracks through the majors lead to different goals – not just an “honors” and “non-honors” version, as is often the case, but catering to different student and faculty interests, and different life goals of the students. Combining these different tracks into a single major provides a useful cohort for what otherwise might become very small groups of students and faculty, and allows greater bureaucratic flexibility as fields and interests evolve over time.

However, the presence of a variety of different tracks through the major will require an unusually strong advising system, particularly since the majors start only in the third year, and thus students might easily find themselves closed out of a particular track through their initial course selections within the major. Fortunately, the small size of the College, the specific orientation toward undergraduate study, and the combination of advising from the Dean of Students office, the Residential College Rectors and Vice-Rectors, and the faculty Heads of Study and others should provide a strong advising safety net.

In generating the initial list of majors, we applied several different considerations. We considered standard disciplinary majors (Philosophy, History, Economics, Psychology), majors that were somewhat broader, but still had a clear disciplinary focus (Literature, Life Sciences, Physical Sciences, Mathematical & Computational Sciences), and interdisciplinary majors (Arts & Humanities; Environmental Studies; Global Studies; Philosophy, Politics & Economics [PPE]). We also favored majors that we considered to be particularly well suited to our location in Singapore (Anthropology and Urban Studies, among others). We feel that we have a particular advantage in crafting “interdisciplinary” majors, in that we can construct them from whole cloth, by considering what such a course of study should contain, rather than having the major shaped at least in part by the resources and interests associated with established disciplinary departments. Furthermore, faculty can be hired for the explicit purpose of teaching in these majors, rather than asking the majors to survive by borrowing from the traditional disciplines.

To ensure the right balance between the common curriculum and the majors, and to preserve space for student choice of electives, we have strictly limited the number of courses that a major can require to ten.

*The special challenges
posed by the sciences*

The sciences are an integral part of our liberal arts college. They do present special challenges to a collegiate community of learning such as Yale-NUS, however, and we have given some thought to how to address these challenges. We believe that our experiment in the liberal arts can succeed only if we present an integrated foundation that combines the strengths of the sciences, the social sciences, the arts, and the humanities in one solid common curriculum.

The research-first ethos is particularly strong in science and parts of the social sciences, given that productivity is readily quantifiable through the value of research grants and the number of citations to research publications. To enhance the research productivity and grant procurement prowess of their faculty, most universities provide lower teaching loads to their science faculty than to faculty in the humanities and social sciences. All of this has fostered an entrepreneurial ethos among scientists in which collective attention to the needs of the university and its students is too often placed second to the goal of building powerful individual research empires. While this change has been widely decried by observers of the university scene, it is deeply implanted in the culture and reward structure of university-based science, and it is difficult to alter.

The consequences of these developments for undergraduate education in science have been significant. A caricature of university science education highlights a familiar set of problems: large impersonal introductory lecture courses with the goal of “weeding out” weaker students through harsh grading schemes; disdain from the faculty for all students other than the most talented few who are put to work as low-level functionaries in a hierarchical lab setting; fierce competition among students for grades, largely driven by the goal of getting into medical school or other graduate programs; a steady flow away from science by students who originally intended to major in scientific subjects; and the establishment of a few universally scorned, intellectually vacuous “gut” courses designed to enable nonscientists to satisfy their science requirements with the least possible effort from students and faculty alike.

This caricature unfortunately contains strong elements of truth. In response, new initiatives on STEM (Science, Technology, Engineering, and Mathematics) teaching have aimed to improve pedagogy. Active-learning techniques, such as the use of “clickers” that allow student responses to be instantly tabulated even in large lectures, have been introduced to many classrooms with the hope of making introductory science classes more engaging. In addition, research in science pedagogy has shown the importance of helping students build up a conceptual lattice of understanding rather than memorizing a series of seemingly disconnected facts. Inquiry-based learning techniques, in which students discover key scientific results by themselves, and early experiences in high-quality research projects, have been shown to improve student satisfaction in the sciences and to increase the number of students who remain in science fields of study.

Courses designed with student learning goals rather than specific content as the starting point, and delivered through “flipped classrooms” and other nontraditional techniques, have been shown to be effective.⁷⁷

Despite these encouraging recent developments, science education in a collegiate setting remains a challenge. The incentive structure for science faculty in universities remains driven by quantifiable research outputs, and so even scholars who are strongly motivated to advance undergraduate education have limited time and effort to devote to this cause. Junior faculty members in particular who devote above-average effort to teaching may damage their chances at tenure. In such conditions, faculty members understandably tend to revert to the easiest way to fulfill their teaching duties, which is to replicate the courses they took as students. Undergraduates also have perverse incentives in regard to their scientific education, particularly in the United States. Serious introductory science courses are generally perceived, often correctly, as having a harsher grading scheme than other courses, and so students motivated to achieve a high grade point average tend to avoid them. The competitive ethos of the introductory courses, especially those associated with premedical study, is also a disincentive. For nonscientists, the distribution system encourages students to seek out courses that will provide the highest grade for the least effort. This in turn leads faculty and departments who want high enrollment to cater to student desires by offering courses for nonmajors that present few intellectual challenges. A “race to the bottom” emerges for science courses for nonscientists.

While Yale-NUS College cannot itself reverse these unfortunate trends, it does have some structural advantages that make presenting a balanced and effective scientific education to all students easier to accomplish. First, the common curriculum prevents the race to the bottom in courses for nonscientists. If all students all take a common course, that course can be developed without concern that appropriate levels of rigor may drive students away. In addition, a sequence of common courses can build on one another both in breadth of subject matter and in sophistication. Second, Yale-NUS’s status as an autonomous liberal arts college located within a large research university should allow the creation of innovative introductory and intermediate science courses, while at the same time introducing advanced students into an intense research environment. We believe that this combination will lead more students to remain enthusiastic about science, both within and outside the science majors.

⁷⁷ President’s Council of Advisors on Science and Technology, *Report to the President, Engage to Excel: Producing One Million Additional College Graduates with Degrees in Science, Technology, Engineering and Mathematics* (February 2012), 84–86, http://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast-engage-to-excel-final_2-25-12.pdf.

We are determined to ensure that our science students are ready for higher-level courses in particular fields, and yet we do not want to compromise our approach to common curriculum science by trying to include all the material normally covered in the various introductory courses. Therefore we have established bridge courses in the fourth semester that lead students from our Integrated Science course toward the specific science field that they aim to focus on – chemistry, physics, biology and so on. The establishment of these courses allows the integrated science courses to follow their own internal logic, while ensuring that students will still be prepared for more advanced work in a particular area of the sciences. Our approach to Integrated Science differs from the similar initiative in NUS’s Faculty of Science in that it begins with an integrated approach that is meant to be foundational for science majors, rather than delaying the integration until later and treating it as an effort to synthesize the learning that has already been encountered in more specialized courses.

It is common for new observers of liberal arts colleges to worry that students interested in serious careers in the sciences or sophisticated quantitative social sciences will not be adequately trained. The evidence, however, shows that liberal arts colleges have long been recognized for their success in producing Ph.D. recipients in the sciences at rates higher than any other type of institution except the most elite large universities. In the United States, the National Science Foundation report of 2008, “Baccalaureate Origins of Science and Engineering Doctorate Recipients,” reported that a group of small, selective, liberal arts colleges labeled the “Oberlin 50” surpassed all other types of institutions, including Research-1 institutions, in producing doctorate recipients when normalized by the size of the institution. In the words of that report:

*A group of 50 small, private baccalaureate schools (the Oberlin 50) was studied in the mid-1980s and was found at that time to contribute greatly to producing future S&E doctorates. These schools have long outproduced (by yield) even the research universities.*⁷⁸

Since the 1980s, these results have remained more or less consistent, with recent data showing a production of doctorate recipients in science and engineering 3–4 times higher at liberal arts colleges than at other types of institutions throughout the period 1997–2006. An earlier study had found that liberal arts colleges were about twice as effective in producing Ph.D.s as the average institution.⁷⁹

⁷⁸ Burrelli et al., “Baccalaureate Origins,” 1.

⁷⁹ Thomas R. Cech, “Science at Liberal Arts Colleges: A Better Education?” *Daedalus* 128, no. 1 (Winter 1999): 197.

The reasons for the success of liberal arts colleges in producing science Ph.D.s have been analyzed well. They include the personal attention that students receive, the smaller class sizes, the opportunity for earlier open-ended laboratory work, the higher importance that undergraduates play in labs that do not have graduate students, and the cross-training in communication and reasoning skills that the humanities portion of the curriculum provides.⁸⁰ Yale-NUS College aims to achieve at least the same performance level as the top liberal arts colleges in the United States do in the sciences. Students will have the benefits of a collegiate learning community, along with access to the advanced research facilities and teams at NUS. Further, the intellectual community will give them practice in relating their work to a diverse audience of colleagues.

⁸⁰ Ibid., 202–204.

7. INDIVIDUALITY, EXPLORATION, AND CHOICE

EVEN AS WE INTRODUCE a demanding common curriculum for all students, we have also tightly capped the number of courses that the common curriculum and the major can fill, so as to protect space for electives. We believe that offering students space to explore a variety of interests is crucial to their intellectual development. Throughout their experience at Yale-NUS College, students will be asked to reflect on their intellectual progress in a number of ways. They will keep portfolios of their work. They will be asked, at various points during their careers, to write reflective essays about what they have learned and what challenges they should focus on next. They will review their portfolios and reflections with dedicated faculty advisers interested in helping students discern patterns in their experience and map out paths forward that respond to their own sense of what they want and need. Students will be given significant room to follow their own interests within the context of the common curriculum courses, co-curricular and extracurricular activities, and of course in their majors. In these ways, the College believes that it can encourage the development of individuality in its students even as it offers a powerful common curriculum.

Electives Yale-NUS makes electives available to all students in every semester after the first year. Since general education requirements are fulfilled in the common curriculum, the electives do not have to be used to fill distribution requirements – they are true electives, subject to no curricular constraint.

To some degree, the range of electives available will depend on the interests and enthusiasms of the faculty and of the students; both will frequently be asked for ideas. There are, however, several categories of electives that seem especially important for the curriculum of the College as a whole, and that the College will pay particular attention to providing.

Some electives will aim to give students practice in developing particular skills, such as writing, speaking, and computing. Although we aim to weave practice in these skills throughout the common curriculum, some students may find themselves wishing to work more intensely on one or another, and these courses will give them a chance to do so.

Other electives will emphasize the arts, from a theoretical, practical, or historical perspective. While students majoring in Arts & Humanities may take many of these courses as part of their specialized study, other students will major in different areas

but want to take these courses out of personal interest and enthusiasm. In many cases, these courses may forge particularly strong links between the curriculum and students' extracurricular activities. We note that such courses might well be taught by non-ladder faculty, for example by part-time faculty from the community or from other institutions, such as the Yong Siew Toh Conservatory of Music at NUS. The College may also host visiting faculty positions specially designed for arts practitioners; the presence of such visitors on campus for varying lengths of time would greatly enhance the culture and curriculum of the whole community.

Another category of electives that will be crucial for the College will include historical and cultural surveys of different times and places. The common curriculum includes narrower "historical immersion" courses, and the major in History will satisfy specialists, but many students will find themselves wishing for a broader understanding of a period or place, and they will be on the lookout for electives of this type.

Minors Should students be allowed, or even encouraged, to acquire distinct credentials in specialized areas outside their majors? NUS in the past allowed for double majors, and then, in a change of policy, moved away from them, toward encouraging the creation of a host of interdisciplinary minors. It is currently working on the optimal conditions for the continued success of its many minor programs. The primary advantage of providing such options is that students with serious interests outside their major can find an institutionalized path in which to pursue them and can have their interest registered on their collegiate records. A real disadvantage of allowing such additional credentials exists, however. Students may be lured into an escalating arms race for credentials, motivated less by their interest in the subject matter than by a desire to garner more levels of official recognition, perhaps in the hope that these additional credentials will help them in their search for employment or graduate school positions.

One recent discussion of this issue took place at Yale, which offers double majors but not minors. When the policy was reviewed, many of the arguments favoring minors came from smaller departments, which felt that their enrollment might be boosted by offering minors, and by allowing students who chose to major in them the chance to minor in larger departments allied with fields widely thought to be more useful. Arguments against allowing minors tended to focus on ways that the allure of credentials might warp student course selection. For example, if there were minors that required six courses, a student who has taken four courses might be strongly inclined to select the two remaining courses rather than other choices that might be more conducive to his or her academic interests and progress. It was also noted that the creation of dozens of minors would impose a large additional bureaucratic burden on the institution as a whole and on individual departments. A strong argument against minors came from

members of the Department of Economics, who felt that if minors were available, the many students who take a range of courses in Economics but do not major in the subject would feel compelled to complete a minor in the field. This was argued to be unnecessary for the student, disruptive for the department, and likely to lead to even lower enrollments in the smaller departments.

While many of these arguments apply also to Yale-NUS College, the structure of the curriculum and the likely culture of the students and surrounding society are apt to be different, and we have come to a different conclusion; we have decided to allow minors, for several reasons. The number of courses required for true double majors would be more than students could complete in four years, given the demanding common curriculum and the importance of electives. We anticipate, however, that there may be substantial familial and societal pressure on some students to select a major that seems useful or practical, either in the sciences or in economics, and therefore we think it might be helpful to allow students the opportunity to balance this consideration against others, having a chance to specialize in another, perhaps less instrumentally chosen, field. It is not clear exactly what kinds of choices the students will make in this regard, so this policy will be reviewed shortly after the first cohort of students has graduated.

Our understanding of a minor is a coherent group of courses, about half the size of a major (approximately five courses), but not including a capstone research project. The minor should include at least some advanced work beyond the common curriculum and the introductory courses in the major. We note that since significant work relevant to all fields is conducted in the common curriculum, students who elect a minor will probably have progressed further in their minor area than the requirement of five courses might suggest. We expect that every field in which Yale-NUS offers a major will also offer a minor. Initially, at least, these will be the only minors offered, though we expect this decision to be reviewed fairly soon since there are good reasons for allowing additional stand-alone minors in certain areas, perhaps including the arts.

Senior capstone An interesting perspective on the history of collegiate education could be written simply by looking at the evolution of senior capstone work over time. In nineteenth-century American colleges, the final year was often spent studying a yearlong course on moral philosophy or rhetoric, sometimes led by the president of the college himself. As the culmination of the curriculum, such a course did not aim to enable students to produce new knowledge. Instead it rewarded them for their maturity and education by offering them a synoptic view of human affairs in the way that highly abstract subjects such as philosophy and rhetoric do. In completing such a course, the seniors proved

themselves ready to enter the ranks of educated citizens, having received from the college the inherited wisdom of earlier ages and having learned how to communicate that knowledge effectively.

Today, senior capstone projects are very different. They usually expect students to work independently, under the supervision of a faculty adviser, on a substantial original work of research and writing. Students often apply for funding during the junior year so as to be able to conduct original research during the summer before senior year, and they may attend workshops bringing them up to speed in state-of-the-art research methodologies in their particular field. In short, the senior capstone experience as most often experienced now demonstrates the importance of original research and the production of new knowledge in contemporary understandings of higher education. According to the common understanding today, the highest level of achievement in scholarship is to make a contribution, even if very small, to the expanding universe of knowledge, rather than to arrive at the most comprehensive understanding possible of natural and human affairs and know how to make it effective in the world.

As noted above, we believe that independent experiences with research are crucial parts of a college education today, but we also want to teach students to bring the outcomes of their research back into a community broader than that of their discipline. We expect that some students will design senior capstone projects focused on particularly pressing problems in contemporary life, bringing to bear techniques and knowledge from a variety of disciplines. Other students will want to immerse themselves deeply in one discipline, producing work at a level appropriate for early-stage graduate students. Still other students may find themselves drawn to projects that involve more than prose writing—perhaps curating an exhibition in the visual arts, staging a dramatic work, creating new visualization possibilities for distinct sorts of data, or coordinating a large-scale research project in urban or marine environments near Singapore, taking advantage of the unique location of Yale-NUS. Other possibilities include collaborative public policy projects in partnership with NGOs and civic organizations in Singapore.

To support a real variety of projects at the high level of intellectual achievement we expect, various “studios” will be created on campus at which students can pool knowledge and ideas, learn new techniques, and present work in progress. Each student will also be paired with one faculty member for in-depth consultation as the project proceeds. In short, we aim to support a wide variety of senior capstone projects, allowing innovative individual research, practical problem-based projects, and synthetic efforts to draw together different parts of a student’s education. Students will leave Yale-NUS with the competence and confidence that comes from having designed and executed a substantial project requiring initiative, responsibility, and independent thought.

In all cases, we will emphasize the importance of explaining one's project to a broader community, supporting a rich array of forums, presentations, exhibits, media projects, and colloquia to share the results of this work. We expect that senior capstone experiences will include a substantial focus on writing and speaking as well as analyzing and thinking. Students will be expected to present their work to audiences within their disciplines as well as audiences outside of them, and to answer questions about their project and defend it against objections. The capstone will thus be a final experience in practicing the skills of communication and argument, both written and oral, that are central to the life of the College and crucial to success after leaving it.

8. THE QUESTION OF CHARACTER

IN THE TRADITION OF LIBERAL ARTS COLLEGES, it has always been recognized that the goal of one's educational experience is not merely intellectual training but also the development of character. Indeed, a residential college cannot help but have some effect on students' characters, whether or not it aims to do so, merely by virtue of the fact that it organizes student life for four full years in so many ways, from the timing of meals and the architecture of dining areas to the awarding of prizes and the recognition and funding of student activities. It makes sense, then, to consider this influence and to be as thoughtful and intentional as possible about what sorts of character traits the College will encourage.

Historically, many liberal arts colleges or similar ventures have been set up to instill character traits prized by a particular tradition. Yale-NUS adopts no specific tradition as its own, though it emerges from several. Our students will come from a variety of backgrounds, and they will be surrounded by the rich mix of Confucian, Buddhist, Hindu, Muslim, Christian, Sikh, and other cultural and religious traditions that inhabit Singapore. It is only natural, then, for Yale-NUS to encourage a set of character traits that are well suited to living in this diverse environment.

*A cosmopolitan education
for a rooted and responsible
citizenship*

Some commentators on liberal education believe that its goal should be to produce "citizens of the world," fully cosmopolitan in outlook.⁸¹ Others see a danger in producing a rootless elite who regard themselves as part of a rarified world of educated professionals but who lack deep ties to particular places and real communities, or to people who have never had the fortune of receiving an elite education.⁸² Indeed, this is one potential drawback of the strongly meritocratic ethic emerging in elite schools in the United States, in Singapore, and around the world.⁸³ Still others believe that

81 Nussbaum, *Not for Profit*, 80. See also Kwame Anthony Appiah, *Cosmopolitanism: Ethics in a World of Strangers* (W.W. Norton & Co., Inc., 2006).

82 For a related development see Devesh Kapur and Pratap Bhanu Mehta, *Indian Higher Education Reform: From Half-Baked Socialism to Half-Baked Capitalism* (Center for International Development, Harvard University, Working Paper, no. 108, September 2004), 6–8, http://www.hks.harvard.edu/var/ezp_site/storage/fckeditor/file/pdfs/centers-programs/centers/cid/publications/faculty/wp/108.pdf.

83 Delbanco, *College*, chap. 5. See also Kenneth Paul Tan, "Meritocracy and Elitism in a Global City: Ideological Shifts in Singapore," *International Political Science Review* 29, no. 1 (2008): 7–27.

students must first of all come to reflect on the meaning of life from within their home cultures before venturing into the world to engage with others.⁸⁴

We think that a college can conscientiously navigate this issue, instilling in students a cosmopolitan appreciation for a wide array of perspectives and an ethics of tolerance and respect, along with a feeling of being rooted in, and responsible for, a particular local community. In fact, we believe that the particular context of Singapore is one in which a certain amount of cosmopolitanism is a necessary part of responsible citizenship. In this moment of generational change, many of our students will find themselves facing new opportunities for participation in civil society and politics. Given the conjunction of civilizations and cultures in the city and the region, responsible citizenship will require increasingly resilient habits of productive engagement across traditional civilizational boundaries.

These priorities will be emphasized in both the curriculum and the co-curriculum, as students will be reading across many cultures even as they have access to experiences and projects embedded in localities in Singapore and the region. We aim to encourage, through service learning projects and other means, community-based activities, a strong norm of service, and a sense of individual and social responsibility. Without such an ethic, the notion of a meritocracy can too easily devolve into a rationalization of inequality and an excuse for elitism.⁸⁵

Finally, we note that great works of literature, history, and philosophy often incite reflection on matters of character. Such works place particular lives or principles on display, and they provoke readers to wonder how certain tendencies of character influence the course of human lives, questions that often take on special urgency at this particular stage of students' maturation. Learning to notice and think about these themes serves not just academic goals; it also can help students see what is at stake in the question of character. The vocabulary that students develop about individual characters in their readings, whether historical or fictional, will help shape the way that they understand themselves and other people, and develop the discernment in judging character that is so crucial to a well-lived life.

*A liberal ethic of learning:
tolerance and civility*

Living together in a college community implies some shared understanding of what modes of expression and activity are well suited for such a community. In particular, collegiate life requires the right balance of tolerance and civility. Tolerance is necessary not only because students and faculty come to the college with different cultural,

84 Kronman, *Education's End*, 99–101.

85 Tan, "Meritocracy and Elitism in a Global City."

religious, racial, gender, and familial expectations and practices, but also, even more importantly, because the activities of learning and teaching are ones that cannot succeed without sometimes provoking and occasionally even offending conventional norms and understandings.

Indeed, insofar as we believe that one significant purpose of liberal arts education is to liberate individuals from the unreflective acceptance of what John Stuart Mill called “dead dogmas” – the unquestioned beliefs inherited from one’s society – a student’s time at college may be deemed unsuccessful if he or she never encounters a deep challenge to closely held beliefs and the real discomfort and even offense that comes with such an encounter. Tolerance is a developed ability to weather such experiences without overreacting, a greater resilience to difference, a habit of treating disagreement as an occasion for conversation and debate rather than an invitation to battle. Civility, in turn, is the habit of speaking and writing responsibly, taking care not to mistake intellectual freedom for license and to keep in mind the goal of expressing oneself in a way that can become a part of a community’s intellectual conversation. Tolerance must come first, because a college is a community built on intellectual freedom; if civility preserves a community but intrudes on intellectual freedom, then the community preserved is not compatible with the goal of free inquiry. Further, civility is not always synonymous with moderation. A conversation without occasional vehemence would not explore the full range of human experience. It would tend, for example, to rule out many responses to injustice, since the human feelings associated with the perception of injustice include indignation. Civility should be understood not as a requirement of mutual respect that will protect everyone from feeling offended or impassioned, but instead as a minimal self-restraint on public expression necessary to prevent the dissolution of the collegiate community.

The balance between tolerance and civility that collegiate life requires is best achieved when students and faculty adopt a broad-minded, liberal, and accommodating frame of mind. One way in which colleges contribute to public life is by producing students with this liberal ethic of learning, an ethic that influences their conduct not only by suggesting the benefits of broad-mindedness and the value of evidence-based argument, but also by demonstrating in practice that differences of opinion need not immediately be politicized in destructive ways.

9. STUDENT LEARNING AND PEDAGOGICAL EXPERIMENTATION

Beyond “critical thinking” WHAT SHOULD STUDENTS LEARN at a college focused on the liberal arts and sciences? Unlike a professional school or training program, liberal arts colleges do not graduate lawyers, doctors, bankers, or any other professionalized individual prepared for a single career path. Instead they aim to equip students with a mind and character that will help them in many different fields, and even beyond their professional lives. Often the intellectual skills that such an education can provide are summed up in the phrase “critical thinking skills.” We fear, however, that this phrase is used more often than interrogated, and we do not want to rest satisfied with it as an explanation of the goals of collegiate education.

Historically, the emphasis on critical thinking arose as faculty tried to articulate the purposes of college education in an earlier era of reform, when merely passing on familiarity with classical learning no longer seemed an adequate rationale. In nineteenth-century America, Amherst College and others began to introduce more modern curricula, including modern languages as well as, or even in place of, classical languages, and generally aiming to equip students for careers in modern society. Under new pressure to justify their courses of study, colleges such as Yale, which defended the teaching of classical learning, conceived new understandings of the purposes of the education they offered. In the *Yale Reports* of 1828, Jeremiah Day famously explained that Yale’s curriculum aimed to provide “the *discipline* and *furniture* of the mind: expanding its powers and storing it with knowledge.” Emphasizing mental “discipline” instead of civic or moral virtue drew upon a (then) modern understanding of psychology in which various mental “faculties” could be improved through practice and discipline. The *Yale Reports* articulated this emerging justification for liberal education and gave it lasting power. Stating the matter so clearly, however, opened the door to a new wave of skepticism about the need to teach the classics: Was it really true that studying Greek and Latin taught mental discipline more effectively than studying modern languages, or other subjects? Cornelius Felton, Albert Gallatin, and others were not convinced, and Harvard’s President Charles Eliot shared their doubt and therefore introduced an elective system in which students could choose their course work rather than follow traditional models.⁸⁶ The legacy of thinking about college as a provider

⁸⁶ Potts, *Liberal Education for a Land of Colleges*, 45–47.

of mental discipline can be traced through the twentieth century to the discourse of “critical thinking.” The theme appears, for example, in Alexander Meiklejohn’s famous mid-century debate with John Dewey about the purposes of liberal education, published in *Fortune* magazine. Meiklejohn told Dewey that students should study the past not to advocate its standards, but “to cultivate, in the minds of teachers and pupils, the processes of critical intelligence.”⁸⁷ In the year 1999 the line of thinking demonstrated its continuing vitality in Howard Gardner’s influential book *The Disciplined Mind*, arguing that education should be focused not so much on facts as on critical thinking skills.⁸⁸

What, precisely, does critical thinking mean? A plethora of formulations can be found, many of them valuable: “To think effectively, to communicate thought, to make relevant judgments, to discriminate among values,” wrote the authors of Harvard’s report on general education in the middle of the twentieth century.⁸⁹ Others have sought to draw attention to different aspects of critical thinking, including the affective dimension of it, emphasizing its ability to foster character traits as well as intellectual qualities. Thus Nussbaum voices hope for curricula that encourage “searching critical thought, daring imagination, empathetic understanding of human experiences of many different kinds, and understanding of the complexity of the world we live in.”⁹⁰ She emphasizes the importance of looking not only at analytic rigor, but also at “the narrative imagination,” defined as “the ability to think what it might be like to be in the shoes of a person different from oneself, to be an intelligent reader of that person’s story, and to understand the emotions and wishes and desires that someone so placed might have.”⁹¹ We would add independence of mind, an appreciation for the value of evidence, an appetite for clear reasoning and concise, articulate argumentation, an acknowledgment of what one doesn’t know, a tolerance for risk and uncertainty, a willingness to take chances, a taste for systematic thought along with an awareness of its limits, and a resilience in the face of complexity and change.

In recent years various groups in the United States have tried to articulate clearer answers to the question, “What do we hope that students will learn in a liberal arts and sciences college?” These new efforts are sparked, in part, by recognition that

87 Alexander Meiklejohn, “A Reply to John Dewey,” *Fortune* 31 (January 1945), 210, quoted in Kimball, *Orators and Philosophers*, 178.

88 Howard Gardner, *The Disciplined Mind: Beyond Facts and Standardized Tests, the K–12 Education That Every Child Deserves*, 2d ed. (Penguin Books, 2000).

89 Harvard University, *Report of the Committee on the Objectives of a General Education in a Free Society*, 65.

90 Nussbaum, *Not for Profit*, 7.

91 *Ibid.*, 95–96.

inappropriate standards of measurement will otherwise be brought to bear on the work of colleges through standardized tests and assessment procedures based on impoverished understandings of the aims of a college education. One of the most valuable of these projects has been the LEAP (Liberal Education and America's Promise) initiative led by the Association of American Colleges and Universities (AAC&U), which identified widespread agreement among educators and employers about the "essential learning outcomes" of liberal education. The AAC&U found that the broad headings of knowledge of human cultures and the physical and natural world, intellectual and practical skills, and a sense of individual and social responsibility could capture much of what many instructors aimed at and what many employers expected.⁹²

One influential effort to quantify such measures of critical thinking skills has been the Collegiate Learning Assessment (CLA) test, which asks students to draw upon a set of documents to answer complex problem-solving questions and which measures student performance multiple times, trying to see what an institution adds to their skills. The results have not been encouraging, though liberal arts majors show greater improvement than other students.⁹³ Results from national studies in the United States suggest that certain sorts of activities contribute to the development of important critical thinking skills: high-quality interactions with faculty, a challenging set of academic expectations, diverse experiences and higher-order, integrative learning.⁹⁴

In designing the common curriculum, majors, and other aspects of the Yale-NUS curriculum, we have kept up with research on pedagogy and assessment. We regard the question of what students are learning as a crucially important and intellectually interesting one, and are committed to asking and answering the question for our institution. At the same time, we are reluctant to concede too much weight to any particular measure of success such as the CLA. One danger that we see is that such a test, while a vast improvement over previous measures, is not "domain-specific" in that it does not test some of the particular intellectual skills that students learn in college. In general, tests such as the CLA may put too much premium on the "transferability" of intellectual skills. This problem has been endemic to the conception of critical thinking,

92 Association of American Colleges and Universities, *College Learning for the New Global Century* (2007), 11–14, http://www.aacu.org/leap/documents/GlobalCentury_final.pdf.

93 Roger Benjamin and Marc Chun, "A New Field of Dreams: The Collegiate Learning Assessment Project," *Peer Review* (Summer 2003), <http://www.aacu.org/peerreview/pr-su03/pr-su03feature2.cfm>; Richard Arum and Josipa Roksa, *Academically Adrift: Limited Learning on College Campuses* (University of Chicago Press, 2011), 20–28.

94 Charles Blaich and Kathleen Wise, *From Gathering to Using Assessment Results: Lessons from the Wabash National Study* (National Institute for Learning Outcomes Assessment, January 2011), 10, http://www.learningoutcomeassessment.org/documents/Wabash_001.pdf.

or mental discipline, from its early appearance in debates on education, when it was introduced precisely to show why learning in one field (classics) was relevant to the contemporary economy. We believe that collegiate learning does have this relevance, and we do not object to demonstrating it; but we also believe that it has other merits, and we would resist any accounting that would seem to reduce the worth of liberal education entirely to the transferable skills it teaches. The content of education, the substance of what is learned, and the experience of learning it—the “furniture” that it leaves in the mind, as the *Yale Reports* put it—are important too.⁹⁵

What are students learning?

With these concerns in mind, and yet also recognizing the need to demonstrate as persuasively as possible what our students are learning, Yale-NUS College encourages its faculty to devote special attention to developing modes of assessment appropriate for their fields and courses. We hope that faculty-driven assessment of student learning, when combined with data about success in graduate school and postgraduate careers, will be able to answer most of the questions that arise about the success of the College. Without a robust and easily comprehensible answer to the question of what students learn at Yale-NUS, the College will be at the mercy of metrics and standards brought to bear from outside, such as the CLA test and the ratings of international universities that Shanghai Jiao Tong University has been compiling since 2003.⁹⁶ Recent experience with measures of research “impact” by the government-led “Research Excellence Framework” in the United Kingdom offers a warning about practices that may become more widespread if the faculty does not take the lead in conceiving plausible modes of evaluating their own work.⁹⁷ Singapore has adopted a variety of assessment metrics and practices,⁹⁸ and the new College will have to find ways of demonstrating the value of its education to students and their parents, not to mention to its funders.

Understanding what students are learning is crucial to improving education and to properly rewarding great teaching and scholarship. There is a danger, however, that in trying to make the standards legible to audiences outside the fields, we may too quickly disregard the subtle understandings of excellence that have developed within the special community of judgment in the field, understandings that are not easily or

95 Potts, *Liberal Education for a Land of Colleges*, 91. See also Keohane, “The Liberal Arts and Presidential Leadership,” on furnishing what Montaigne called “the back room” of the mind.

96 Academic Ranking of World Universities, <http://www.arwu.org>.

97 Stefan Collini, “Impact on Humanities,” *The Times Literary Supplement*, 13 November 2009, http://www.the-tls.co.uk/tls/reviews/arts_and_commentary/article740866.ece.

98 Michael H. Lee, “A Tale of Two Cities: Comparing Higher Education Policies and Reforms in Hong Kong and Singapore,” *Australian Journal of Education* 46, no. 3 (2002): 255–86.

simply quantified or quickly explained to observers with little experience in the field. Colleges must find ways of respecting well-established disciplinary communities of judgment and the internal standards they use to assess academic work and learning, even as they insist that students and teachers also address the broader community.

Faculty and students therefore need flexibility in determining modes of evaluation appropriate to particular fields and to particular sorts of projects. In thinking about how to evaluate the teaching and learning that is happening at the College, we advocate a variety of approaches and hope to keep in mind several considerations. First, evaluations should aim to be useful to students and faculty as they consider how to modify the organization of a course and the approach taken to student activities and assignments. We aim to avoid, as much as possible, unidirectional assessment in either direction – students unreflectively evaluating faculty as popularity contests without considering what faculty are trying to accomplish, and faculty assessing students according to common grading schemes without considering how well those schemes capture the deeper learning going on in the classroom. Second, unlike many courses in Singapore and around the world, Yale-NUS courses will not limit evaluation of student work to final exams, but will instead assess a variety of assignments including writing in a diverse array of genres, oral presentations and improvisation, visualizations, collaborative projects and performances, portfolios of student work and student reflections on their development, and one-on-one interviews with students on what they have learned on particular topics.

Third, we aim to share evaluations of courses with the broader College community in ways that contribute to an ongoing conversation about teaching practices and pedagogical experimentation and also about student learning strategies and ways of studying. Each common curriculum course, for example, will build and keep a reservoir of course content and pedagogy that extends far beyond what is actually taught in any one semester, so that instructors can draw from it as they plan their approach to different topics. Essays and reflections on teaching and learning, as well as the latest research on these topics, will be compiled and made available to all faculty through online links, and such research will be a regular topic at faculty meetings and workshops. In addition, constant conversation about the evolution of the common curriculum, the majors, and the co-curriculum will reinforce the idea that questions about what students learn are central to the College community. Finally, many faculty we have consulted have remarked upon the importance of the fact that some benefits of liberal arts courses cannot be fully felt or appreciated by students until long after the courses have finished – months, years, or decades even. So the College will institutionalize ways of collecting reflections on courses long after the usual end-of-semester course evaluations. Long-term curriculum reevaluation will then be part of a much

larger attempt to create a community of alumni who continue to contribute in all manner of ways to their institution in the years to come.

Better ways of teaching

Traditional lectures and active seminar discussions will be important at Yale-NUS, but so will a host of new forms of teaching and learning. Faculty are devoting attention to team-based learning and various forms of experiential education. Building a new college from the ground up enables our faculty to design courses based on the latest educational research, which has shown the importance of interactive pedagogy and experiential and peer learning. Initiatives such as the Peer Instruction Network, established by Eric Mazur of Harvard, and the Center for Scientific Teaching, led by Jo Handelsman at Yale, have demonstrated how important it is to rethink the techniques we use in the classroom. Mazur's team has documented significant increases in final exam scores in courses using Peer Instruction, as well as a 15% increase in the number of students who remain in science for those courses compared to traditionally taught courses.⁹⁹ Handelsman's work has influenced science instructors across the country with summer workshops, and her group stresses effective teaching that includes collaboration in classrooms, and active learning that includes demonstrations, hands-on activities, clickers, primary literature, problem-based learning, "flipped" classrooms, and case studies to substitute for traditional lectures.¹⁰⁰ The science curriculum has been developed after consultation with Handelsman's group, and the Yale-NUS courses in general will explore these new types of pedagogy, informed not only by the research in our intellectual disciplines, but also by the gains made in understanding psychology, cognition, and learning in recent years. Additionally, the faculty working on our quantitative reasoning course in the common curriculum is experimenting with team-based learning, a carefully structured approach to maximizing the value of small-group interactions in the classroom.¹⁰¹

Another obvious resource under rapid development at the moment is online course material, especially the new Massive Open Online Courses (MOOCs). NUS has recently established an agreement with one company offering such material, Coursera, and Yale has offered online courses through Open Yale Courses. We do not believe that

99 Nathaniel Lasry, Eric Mazur, and Jessica Watkins, "Peer Instruction: From Harvard to the Two-year College," *American Journal of Physics* 76, no. 11 (November 2008): 1066–69, http://ajp.aapt.org/resource/1/ajpias/v76/i11/p1066_s1. See <http://blog.peerinstruction.net/2012/06/12/peer-instruction-network-the-newest-social-network-for-innovative-educators-everywhere>.

100 Jo Handelsman, Sarah Miller, and Christine Pfund, *Scientific Teaching* (W.H. Freeman, 2007). See <http://cst.yale.edu>.

101 See Team-Based Learning Collaborative, <http://www.teambasedlearning.org>.

these online experiences can by themselves achieve the educational goals outlined in this report. Online material is merely another source of organized information. To be integrated into a collegiate learning community rather than distracting students from it, that material must become part of a human interaction between professors and students. We are eager to establish the College as one leader in thinking about how best to integrate this new material into the intensely face-to-face style of learning that collegiate life supports. Already our faculty are actively considering ways to take advantage of online courses on computer programming languages; online lectures on key literary works; and online collections of visual art, historical manuscripts, and so on. Asking students to watch online lectures at home and then discussing them in class is one model that is now spreading. We also have plans to use the Internet for real-time conversations between our classrooms and those in other colleges. We are intensely interested in finding additional ways of humanizing the incredible wealth of information available online.

Some of the most innovative thinking about pedagogy is coming from faculty in the interdisciplinary majors such as Environmental Studies, Urban Studies, and Global Affairs, who have been eager to identify the most effective means of linking classroom learning with field excursions, experiential and service-learning projects, and community-based and inquiry-based approaches.

In addition to newly developed modes of teaching, faculty are also considering ways to incorporate older modes of teaching that have fallen out of use in many large universities but that may find new life in this setting – such as small Oxbridge-style tutorials of just a handful of students with a faculty member. The intense contact with a professor that a tutorial system would provide might be especially useful at key moments in the students' education, such as the first year, when it would help teach certain habits of reading, analysis, and conversation.

The College is also demonstrating commitment to interdisciplinary projects outside the context of courses, devoting an entire week of the fall semester – “Week Seven” – to its Learning Across Boundaries (LAB) initiative, which will encompass a fresh set of projects, performances, readings, excursions into Singapore and nearby environments, colloquia and conferences, and collaborations with organizations and individuals outside the academic world. The “boundaries” that we want to cross include not only traditional disciplinary boundaries, but also the boundaries between academic study and practical problem solving. While part of the liberal arts and sciences involves retreating from the world into a space of reflection, an equally vital part of the collegiate experience requires engaging with contemporary problems and new technologies. Students will have opportunities to engage substantively with representatives of leading industries, with governmental and nongovernmental organizations, and with smaller proj-

ects in communities within Singapore and in the region. The College has invested substantially in state-of-the-art computing power and visualization technology and will give students hands-on experience in sorting through the massive data sets that are coming into being and that promise to transform many fields in the sciences and social sciences, in addition to pointing to new domains of activity in the digital humanities. Contemporary work on the environment, energy, urban studies, and regional coordination of political, economic, and scientific projects will be the focus not only of student internships but also of academic work in the common curriculum (through the “current issues” courses), in the majors and electives, and in many LAB events during Week Seven and indeed throughout the academic year and summers.

The co-curriculum It is normal to divide student life at college between academic work and extracurricular activities. We, however, identify a third area of activity: the “co-curriculum.” We are keen to foster this domain of student activity, which lies outside formal classwork but is still central to students’ learning and development. While there will certainly be a lively domain of purely extracurricular activities for students, there will also be an active co-curriculum in which students take the initiative to design and execute projects. In the co-curriculum students will have the benefit of faculty advice and will reflect on their experiences in written or project portfolios that will become part of conversations with faculty advisers about their intellectual and personal development. How do their experiences in leading student organizations, or volunteering in the local community, relate to the reading they have been doing in literature or philosophy classes, and to the social science on inequality they have been studying?

The co-curriculum complements and completes a curriculum by giving scope to the free play of creativity and a sense of personal discovery. The co-curriculum occupies a space between the structured curriculum and the provision of free time for extracurricular activities. It combines a flexible and minimal element of purposiveness with great flexibility in what to do, how, and where. A reading list or a seminar or a lab experiment focuses attention on a specific task with a set goal. Extracurricular life gives students an opportunity to develop interests in the form of hobbies, or pursuits not directly related to the curriculum. In contrast, the co-curriculum fosters a flexible channelizing of creativity and spontaneity into a variety of interactive experiences whose contribution to the learning process becomes meaningful in ways that are not tightly controlled by a structure, as in a curriculum, but are not as free as in the provisions of time and space for extracurricular activities. Each of these three components of the educational experience fulfills a role; and the balance among them ensures that education can become truly all-round and liberating as well as enriching.

The co-curricular program at Yale-NUS College will provide a number of opportunities for experiential learning outside the classroom and the lab.

- Every student at Yale-NUS will have a significant learning experience outside Singapore, either during the summer or during the semester.
- Week 7 of the first semester will break off from all classroom and lab activity in order to provide students the opportunity to take active part in one of several projects: these could entail participating in discussion groups, organizing a debate on a topic of contemporary relevance, or engaging in a team-activity with an interdisciplinary focus.
- Short field trips devoted to exploring aspects of life in Singapore with the practical aim of engaging with a topic or aspect of contemporary life firsthand (for example, exploring some aspect of the natural and urban environment, visiting a museum or a gallery to gather data on a specific theme or topic, getting to know the plight of the old or the handicapped, interviewing people in the community on a specific topic of contemporary relevance).
- Longer field trips outside Singapore, meant to enhance awareness of a specific aspect of contemporary or historical significance in the visual or performing arts, religion, architecture, the natural and the social sciences, or cultural phenomena unique to specific places in the region. These will be organized by a small committee consisting of representatives from the faculty and the Yale-NUS Dean of Students and Dean of International Affairs.
- Community service related to specific topics in the sciences, social sciences, or the arts.
- Short internships offering opportunities for practical hands-on experience with brief stints at the workplace in industry, media, or social organizations.
- Performance activities such as producing plays or short films.
- Reading and discussion groups on topics outside the curriculum that are of topical and contemporary significance to society.
- Interdisciplinary activities organized by a small committee that includes representatives from the faculty and the Yale-NUS Dean of Students.

10. CONTINUING THE CONVERSATION

AS WE HAVE NOTED THROUGHOUT, we believe that a crucial part of what makes collegiate communities of learning distinctive is the constant conversation *about* learning that they encourage. The members of the inaugural faculty of Yale-NUS College have invested an enormous amount of time and energy in the creation of new syllabi for the common curriculum courses and other parts of the curriculum, but they recognize that if those syllabi and plans remain in effect far into the future in the form they now have, wholly unchanged, the spirit of the College will have been lost. The community that has begun to emerge among these faculty is in large part the product of the discussions, debates, and negotiations they have conducted about what they together will teach, and how. To preserve the impressive sense of vitality and purpose that has been evident in the first months of activity, the faculty will have to find a way to weave the work of curriculum development into the normal activity of the College. The administration will have to reward faculty for their contributions to the College as well as for their contributions to their research disciplines. And the *students*, whose voices have been heard mainly in the abstract thus far, will bring a whole new set of hopes and insights that will add richly to the conversation as soon as they arrive in August.

Much of this conversation will emerge spontaneously and in informal settings, from the College common spaces and dining halls to the classroom to the covered paths and courtyards. In addition, however, the faculty is already taking a number of concrete steps to ensure that the discussion continues. Periodic reviews of the common curriculum and majors are an intrinsic element of our curriculum plan. We also intend to host regular symposia on the liberal arts and sciences, on experiential learning and new pedagogy, and on how best to take advantage of new technologies in ways that enhance the benefits that come with living together in collegiate communities of learning. In short, while the College is trying to build upon the best parts of the impressive tradition of liberal arts colleges, it is also very much looking forward. Yale-NUS College is eager to take advantage of new technologies and new opportunities for cross-cultural partnerships to demonstrate how vital and promising the world of small, intense liberal arts colleges can be in the new millennium.

ONLINE INFORMATION ABOUT THE CURRICULUM

Yale-NUS College Web site

<http://www.yale-nus.edu.sg>

Curriculum Chart: Four years at Yale-NUS

<http://www.yale-nus.edu.sg/student-experience>

Common Curriculum Course Descriptions

<http://www.yale-nus.edu.sg/index.php/learning/common-curriculum/common-curriculum-courses.html>

Descriptions of the Majors

<http://www.yale-nus.edu.sg/index.php/learning/majors.html>

Double Degree with Law

<http://www.yale-nus.edu.sg/index.php/learning/double-degree-with-law.html>

Concurrent Degree with Yale School of Forestry & Environmental Studies

<http://www.yale-nus.edu.sg/index.php/learning/concurrent-degree-with-yfes.html>

Week Seven: Learning Across Boundaries

<http://www.yale-nus.edu.sg/index.php/learning/week-seven.html>

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