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THE BIG PICTURE

Assessing the Future of Higher Education

For WHAT IT'S WORTH

The value of a university education



Editor's Note: This article derives from an endowed lecture President Gutmann delivered on achieving the aims of higher education at the Spencer Foundation Conference at Northwestern University and subsequently developed further at the De Lange Conference at Rice University. Revised for publication October 21, 2013.

In 2010, PayPal co-founder and Facebook “angel” investor Peter Thiel announced he would annually award \$100,000 each to 20 young people for them to drop out of college and spend two years starting a tech-based business. “You know, we’ve looked at the math on this, and I estimate that 70 to 80 percent of the colleges in the U.S. are not generating a positive return on investment,” Thiel told an interviewer, explaining his view that we are in the midst of a higher education bubble not dissimilar to the housing and dot-com bubbles of previous decades. “Education is a bubble in a classic sense. To call something a bubble, it must be overpriced and there must be an intense belief in it... there’s this sort of psycho-social component to people taking on these enormous debts when they go to college simply because that’s what everybody’s doing.”

Since his announcement, more than 60 Thiel Fellows have decamped from university—a significant number of them from Stanford, MIT, and Ivy League schools—to follow their dreams of entrepreneurial glory. Thiel says he hopes his program will prod

more people to question if a college education is really worthwhile: “Education may be the only thing people still believe in in the United States. To question education is really dangerous. It is the absolute taboo. It’s like telling the world there’s no Santa Claus.”

Far from being dangerous, the exercise of questioning the value of a college education has never been more important. For many Americans, the grim employment realities since the start of the Great Recession of 2008 have called the value of higher education into question. So we all would do well to ask: Do universities provide private and public benefits commensurate with their private and public costs?

This is a complex, but not impossible, question to answer. The simplest response is to tally the added income benefits a university education accrues to its graduates, subtract its added costs, and determine if in fact benefits exceed costs. Some economists have done this quite well. The overwhelming answer is that a college education has paid off for most graduates to date, has *increased* rather than decreased its wage premium as time has gone on, and can

be expected to continue to do so moving forward. If *well-paid* equates to *worthwhile*, then the worth of a college education can be settled by the net wage premium of the average college graduate over the average high school graduate—there would be little more to discuss in the matter.

But it would be a serious mistake to equate the value of a university education to the wage premium earned by its graduates. If higher education is to be understood as something more—something much more—than a trade school in robes, before answering the question of whether a university education is worthwhile, we must first address the more fundamental—and more fundamentally complex—question of mission: *What should universities aim to achieve for individuals and society?*

It is reassuring to those who believe in the worth of a university education—and all the more so in a high-unemployment, low-growth economy—to show that the average person with a college education earns a lot more over her lifetime than the average high school graduate, even after subtracting the cost of college. But even if

we are reassured, we should not allow ourselves to be entirely satisfied with that metric, because economic payback to university graduates is neither the only aim, nor even the primary aim, of a university education. Rather, it is best to consider the value-added proposition of higher education in light of the three fundamental aims of colleges and universities in the 21st century:

- The first aim speaks to who is to receive an education and calls for broader access to higher education based on talent and hard work, rather than family income and inherited wealth: **Opportunity**, for short.

- The second aim speaks to the core intellectual aim of a university education, which calls for advanced learning fostered by a greater integration of knowledge not only within the liberal arts and sciences but also between the liberal arts and professional education: **Creative Understanding**, for short.

- The third aim is an important consequence to the successful integration of knowledge, not only by enabling and encouraging university graduates to meaningfully contribute to society, but also in the creation of new knowledge through research and the application of creative understanding: **Contribution**, for short.

Although the challenges of increasing opportunity, advancing creative understanding, and promoting useful social contribution are not new, they take on a renewed urgency in today's climate. Jobs are scarce. The United States is perceived to be declining in global competitiveness. Gridlock begets our political discourse and increasingly seems to define our national sense of purpose as well. In this environment, it behooves us to remind those who would propose to reform higher education by simply removing some or all of it of the apt observation of the Sage of Baltimore, H.L. Mencken: "There is

an easy solution to every human problem—neat, plausible, and wrong."

Many external obstacles to educational and economic opportunity exist in the United States—including poverty, broken families, and cutbacks in public support—which warrant our national attention and, in some instances, urgent action. No one credibly claims that greater access to college education will solve all or even most of these issues. But there is good reason to believe that greater access to high-quality higher education is a vitally important tool in building a more just, prosperous, and successful society. We can, and we *must*, do a better job in meeting the three fundamental goals of opportunity, creative understanding, and contribution to afford the utmost benefits of higher education for both personal and societal progress. Taking to heart the ethical injunction, "physician heal thyself," I focus here on what universities themselves can do to better realize their primary aims.

Starting with the first: What can universities do to help increase educational opportunity? For low- and middle-income students, gainful employment itself is likely to be the most basic economic advantage of a college degree. A recent Brookings Institution study found college is "expensive, but a smart choice," noting that almost 90 percent of young college graduates were employed in 2010, compared with only 64 percent of their peers who did not attend college. Moreover, college graduates are making on average almost double the annual earnings of those with only a high school diploma. And this advantage is likely to stick with them over a lifetime of work. Perhaps most relevant is that even in the depths of the Great Recession, the unemployment rate of college graduates was less than half that of high school graduates, and never exceeded

5.1 percent. Clearly, the more affordable universities make their education to qualified young people from low- and middle-income families, the more we will contribute to both educational and economic opportunity. Other things being equal, universities provide even greater value-added opportunity to low- and middle-income students than to their wealthier peers.

It is especially important to note that opening the door to higher education can have profound effects both on an individual's lifetime earnings and lifelong satisfaction, regardless of whether or not that door is framed by ivy. Less selective two-year, four-year, and community colleges have an especially important role to play here, as selective universities cannot do everything: their focus on cutting-edge study and discovery limits their ability to engage in compensatory education. (The ability to work with a broad range of student readiness is one of the great advantages of community colleges and some less selective institutions, an advantage we risk forfeiting as an ever-higher percentage of the cost of an education is shifted from state and government support to individual responsibility.) Nonetheless, the available data show that selective universities can provide greater access to qualified students from low- and middle-income families than they have in the past.

My concern for increasing access began with a focus on recruiting qualified students from the lowest income groups. Learning more led to the conclusion that increasing access for middle-income students should also be a high priority. At Penn, we began by asking: What proportion of students on a set of selective university campuses (that included Penn) come from the top 20 percent of American families as measured by income? The answer (as of 2003) was 57 percent.

Since all colleges and universities should admit only students who can succeed once admitted, selective colleges and universities also need to ask: What percent of all students who are well-qualified come from the wealthiest 20 percent? Thirty-six percent of all highly qualified seniors (with high grades and combined SATs over 1,200)

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come from the top 20 percent, while 57 percent of selective university students come from this group. Thus, the wealthiest 20 percent of American families are overrepresented on our campuses by a margin of 21 percent. All of the other income groups are *underrepresented*. Students from the lowest 40 percent of income distribution, whose families earn under about \$41,000, are underrepresented by 4.3 percent. The middle 20 percent, who come from families earning \$41,000 to \$61,000, are underrepresented by 8.4 percent. Students from the second highest income group, whose families

earn between \$62,000 and \$94,000, are also underrepresented by 8.4 percent.

Increasing access to our universities for middle- and low-income students is both an especially worthy, and an increasingly daunting, challenge in the wake of the Great Recession. Before the Recession, taking financial aid into account, middle- and low-income families were spending between 25 percent and 55 percent of their annual income to cover the expense of a public four-year college education. That burden has skyrocketed in the past five years, especially for middle-income students who are ineligible for Pell grants and who attend public universities whose public funding (in many cases) has been decimated. This has led to a situation where a student from a typical middle-income family today may pay less to attend Penn than many flagship public universities!

Yet private universities too have experienced a painful financial squeeze. Only by making student aid one of their highest priorities and successfully raising many millions of dollars from generous donors can most private institutions afford to admit students on a need-blind basis and provide financial aid that meets full need. This may be the reason why only about one percent of America's 4,000 colleges and universities are committed to need-blind admissions *and* to meeting the full financial need of their undergraduate students. An even smaller group—just a tiny fraction—of universities are committed not only to meeting the full financial need of all students who are admitted on a need-blind basis, but also to providing financial aid *exclusively on the basis of need*. Those of us in this group thereby maximize the use of scarce aid dollars for students with demonstrated financial need.

At Penn, a focus on need-only aid has enabled us to actually lower our

costs to all students from families with demonstrated financial need. Since I became president, we have increased Penn's financial aid budget by more than 125 percent. And the net annual cost to all aided undergraduates is actually ten percent lower today than it was a decade ago when controlled for inflation. Penn also instituted an all-grant/no-loan policy, substituting cash grants for loans for all undergraduates eligible for financial aid. This policy enables middle- and low-income students to graduate debt-free, and opens up a world of career possibilities to graduates who otherwise would feel far greater pressure to pick the highest paying rather than the most satisfying and promising careers.

Although much more work remains, Penn has significantly increased the proportion of first-generation, low- and middle-income, and underrepresented minority students on our campus. In 2013, one out of eight members of Penn's freshman class will be—like I was—the first in their family to graduate from college. The percentage of underrepresented minorities at Penn has increased from 15 percent to 22 percent over the past eight years. All minorities account for almost half of Penn's student body. After they arrive, many campus-wide initiatives enable these students to feel more at home and to succeed. Graduation rates for all groups are above 90 percent.

It is also important to note that the benefit of increasing opportunity extends far beyond the economic advancement of low- and middle-income students who are admitted. Increased socio-economic and racial diversity enriches the educational experience for *everyone* on a campus. By promoting greater understanding of different life experiences and introducing perspectives that differ profoundly from the prevailing attitudes among the most

privileged, a truly diverse educational environment prods all of us to think harder, more deeply, and oftentimes, more daringly.

This observation speaks to the second aim of a university education: *cultivating creative understanding*. Our universities face a daunting challenge: we must immerse students in the unprecedented torrent of new knowledge our contemporary society has unleashed while at the same time somehow providing them with the intellectual tools to make cogent sense of it all. They must be facile with facts and figures, quick in apprehension, and yet slow to jump to easy and ready conclusions. This is the essence of training them to think creatively, as they will be called to do in addressing the most challenging problems facing the world of today and tomorrow. We must optimize their global comprehension, a term used here in the broadest possible sense: global not just as in transnational, but more pointedly as in all-encompassing, as in integrating multiple and oftentimes contradictory perspectives. It will be their global understanding that makes our highly educated students economically competitive, intellectually innovative, and primed for continued lifelong learning.

So what does this need to cultivate global understanding in the 21st century require of our universities? Among other things, I suggest it demands that we foster intensive learning across academic disciplines within the liberal arts and integrate that knowledge with a much stronger understanding of the role and responsibilities of the professions. Whether the issue is health care or human rights, unemployment or immigration, educational attainment or economic inequality, the big questions cannot be comprehended—let alone effectively addressed—by the tools of only one academic discipline, no mat-

ter how masterful its methods or powerful its paradigms.

Consider, for example, the issue of climate change in a world that is both more interconnected and more populous than ever before. To be prepared to make a positive difference in this world, students must understand not only the science of sustainable design and development, but also the economic, political, and other issues in play. In this immensely complex challenge, a good foundation in chemical engineering—which is not a traditional liberal arts discipline nor even conventionally considered part of the liberal arts (engineering is typically classified as “professional or pre-professional education”)—is just as important as an understanding of economics or political science. The key to solving every complex problem—climate change being one among many—will require connecting knowledge across multiple areas of expertise to both broaden and deepen global comprehension and in so doing unleash truly creative and innovative responses.

A liberal arts education is the broadest kind of undergraduate education the modern world has known, and its breadth is an integral part of its power to foster creative understanding. But it is a mistake to accept the conventional boundaries of a liberal arts education as fixed, rather than as a humanly alterable product of particular historical conditions.

In my own field of political philosophy, for example, a scholarly approach centered on intellectual history ceded significant ground in the 1970s to critical analysis of contemporary public affairs, which was a paradigm common to many earlier generations of political philosophers. Were the liberal arts motivated solely by the pursuit of knowledge for its own sake, and not any concern for worldly relevance, then

it would be hard to make sense of such shifts. In the case of this important shift in political philosophy, scholars thought it valuable, in the face of ongoing injustice, to revive a tradition of ethical understanding and criticism of society.

A liberal arts degree is a prerequisite to professional education, and most liberal arts universities and their faculties stand firmly on the proposition that the liberal arts should inform the professions. Why then are liberal arts curricula not replete with courses that teach students to think carefully, critically, and creatively about the roles and responsibilities of professionals and the professions? Perhaps we are assuming that students will make these connections for themselves or that it will suffice if professional schools do so later. Neither of these assumptions can be sustained.

For example, we must not assume that students themselves will translate ethics as typically taught in a philosophy curriculum into the roles and responsibilities of the medical, business, and legal professions. The ethical considerations are too complex and profoundly affected by the institutional roles and responsibilities of professionals. Many lawyers, for example, are part of an adversarial system of justice; many doctors are part of a system where they financially benefit from procedures the costs of which are not paid directly by their patients; and many businesspeople operate in what is commonly called a free market, where external interferences are (rightly or wrongly) presumed, *prima facie*, to be suspect. These and many other contextual considerations profoundly complicate the practical ethics of law, medicine, and business.

My primary point is this: Although the separation of the liberal arts from the subject of professional roles and responsibilities may be taken for granted because it is so conventional, it really

should strike us as strange, on both intellectual and educational grounds, that so few courses in the undergraduate curriculum explicitly relate the liberal arts to professional life. This is a puzzle worthy of both intellectual and practical solution.

This stark separation of the practical and theoretical was neither an inevi-

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table outgrowth of earlier educational efforts, nor has it ever been universally accepted. In fact, it flew in the face of at least one early American effort to integrate the liberal arts and professional education. In his educational blueprint (“Proposals Relating to the Education of Youth in Pensilvania”), which later led to the founding of the University of Pennsylvania, Benjamin Franklin called for students to be taught “every Thing that is useful, and every Thing that is ornamental.” Being a principled pragmatist, Franklin immediately ad-

ressed an obvious rejoinder, that no educational institution can teach everything. And so he continued: “But Art is long, and their Time is short. It is therefore propos’d that they learn those Things that are likely to be most useful and most ornamental.”

As Franklin’s intellectual heirs, we recognize that something educationally significant is lost if students choose their majors for either purely scholastic or purely professional reasons, rather than because they want to be both well-educated *and* well-prepared for a likely future career. The introduction of distribution requirements for all majors is one way of responding to this potential problem. The glory and strength of American liberal arts education is its enabling undergraduates to keep their intellectual sights and their career options open, while cultivating intellectual curiosity and creativity that will enhance any of the career paths they later choose to follow. These are among the most eminently defensible aims of a liberal arts education: to broaden rather than narrow the sights of undergraduates, and to strengthen rather than stifle their creative potential.

I propose that we proudly proclaim a liberal arts education, including its focus on basic research, as broadly pre-professional and optimally instrumental in pursuit of real world goals. At its best, a liberal arts education prepares undergraduates for success in whatever profession they choose to pursue, and it does so by virtue of teaching them to think creatively and critically about themselves, their society (including the roles and responsibilities of the professions in their society), and the world.

So what can we do to bolster this optimal educational system, as envisioned by Franklin? As 21st century colleges and universities, we can build

more productive intellectual bridges between liberal arts and professional education. We can show how insights of history, philosophy, literature, politics, economics, sociology, and science enrich understandings of law, business, medicine, nursing, engineering, architecture, and education—and how professional understandings in turn can enrich the insights of liberal arts disciplines. We can demonstrate that understanding the roles and responsibilities of professionals in society is an important part of the higher education of democratic citizens.

This leads to the third aim of a university education: maximizing social contribution. Here in particular is where the university’s age-old focus on training scholars and advancing scholarship bumps up against its relatively recent focus (first brought to the fore by German and American research universities of the mid- and late-nineteenth century) on *discovery* and the creation of new knowledge. The sweep of the university’s place in society is long, going back more than a thousand years; in that context, the role of the modern research university in America, dating back just to the 1870s, is a comparatively recent innovation. It is nevertheless a development that has had far-reaching and profound consequences in areas ranging from health and medicine to physics and material sciences, the social sciences, and the humanities. Basic research now plays an integral role in our understanding of the liberal arts, and we have come to understand our colleges and universities not just as training grounds for the next generation of fully prepared democratic citizens, but no less as vital economic engines whose discoveries drive future waves of innovation and human progress.

These are discoveries such as those made by Dr. Carl June and his team at

Penn's Abramson Cancer Center, with contributions from colleagues at the Children's Hospital of Philadelphia. Their pioneering research with individualized cancer treatments produced a reengineered T-cell therapy. Just in time, too, for young Emma Whitehead, who was stricken with advanced leukemia when she was just five years old. Under Dr. June's care, Emma, now seven, has beaten her cancer into remission. She's back at school, laughing and learning and playing with her friends. Her miraculous recovery not only means a renewed chance at a long, fulfilling life for her and her parents—it promises renewed hope for so many who are ravaged by cancer.

In university classrooms and laboratories across the country, the brightest minds are leveraging research and discovery to contribute to the social good. Most of these stories are not as dramatic as Emma's, but each in its own way has changed and will continue to change how we live and work and understand our world. The full tale of the benefits that universities bring extends far beyond technological and medical advances. We help governments build good public policy based on robust empirical data, garnered from university research. We build better international cooperation through the study of languages and cultures, economic markets, and political relations. We strengthen economies by fostering scores of newly discovered products, markets, and industries. We safeguard our collective health and well-being with insight into global phenomena and systems such as climate change, shifting sea levels, and food supply and agricultural production. All the vital basic and applied research being conducted by universities cannot be accounted for in any one list—the sum is too vast. What I can sum up here is this: If we do not do this research, no one will.

Colleges and universities also contribute to society at the local level by modeling ethical responsibility and social service in their institutional practices and initiatives. Their capital investments in educational facilities contribute to the economic progress of their local communities. Colleges and universities at every level can be institutional models of environmental sustainability in the way they build and maintain their campuses.

While the core social contribution of universities lies in both increasing opportunity for students and cultivating their creative understanding, the analogous core social contributions of universities in the realms of faculty research and clinical service are similarly crucial. And both are only strengthened by better integrating insights across the liberal arts and the professions. An education that cultivates creative understanding enables diverse, talented, hardworking graduates to pursue productive careers, to enjoy the pleasures of lifelong learning, and to reap the satisfactions of creatively contributing to society. The corresponding institutional mission of colleges and universities at all levels is to increase opportunity, to cultivate creative understanding, and—by these and other important means such as innovative research and clinical service—to contribute to society.

At their best, universities recruit hardworking, talented, and diverse student bodies and help them develop the understandings—including the roles and responsibilities of the professions in society—that are needed to address complex social challenges in the 21st century. To the extent that universities do this and do it well, we can confidently say to our students and our society that a university education is a wise investment indeed. ■