

The Role of the Humanities in a Research University

by

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A Tribute to Dale R. Corson

I am pleased to welcome you to this symposium held in honor of a superb scientist, a wise academic leader, and, above all, a great Cornellian: Dale R. Corson. Others will talk about Dale's accomplishments as a scientist, a policy maker, an adviser to governments and to industry, but the point I want to underline is that Dale Corson is an outstanding university citizen in the broad, traditional, and most valuable sense. Dale assumed the presidency of Cornell at a time when universities nationally were struggling for their identities within society at large, and when Cornell, in particular, was fractured to an extent never equaled before or since. Dale – while mindful of national issues and deeply immersed in the complexities of the situation at Cornell – understood the nature of the university and stood for its essential values: freedom of thought and responsibility of action, and with extraordinary deftness he pulled the fractured university back together by reminding all its members of the university's commitment to academic freedom and to civil discourse – values that transcend the other purposes of the university to which we all belong.

Dale began as a faculty member, and he remains a faculty member. Today he is a remarkably engaged emeritus professor, quietly building Kendal into one of the strongest academic institutions in the Northeast. And although he has earned a great deal of professional acclaim as a physicist and as a national spokesperson for research universities, his greatest contribution, I believe, has been his dedication to the idea of the university as a community – an academic community whose mission is to pursue truth and to assist each new generation in its pursuit.

I find it revealing that Dale assumed the Cornell presidency not because he had aspirations to become a university president, but because he loved Cornell. Academic leadership, not administration, is what interested him, and he has often said that he was happiest at Cornell – not as president, but as provost, when he was the academic leader, responsible for appointing, retaining, and inspiring a strong faculty. As provost **and** as president, Dale Corson led Cornell with superb academic taste and high standards. He had a remarkable ability to endure ambiguity, to tolerate disagreement, and to harness argument and the force of strong personalities to create constructive dialogue and to reach wise decisions – recognizing, as only a faculty member can, that a certain amount of contentiousness is essential in a great university.

More than 50 years ago, Cornell's distinguished historian Carl Becker grasped this aspect of the university when he characterized professors as people "who think otherwise." ". . . (T)he essential quality of a great university," Becker maintained, "derives from the corporate activities of such a community of otherwise-thinking men (and women). By virtue of a

divergence as well as of a community of interests, by the sharp impress of their minds and temperaments and eccentricities upon each other and upon their pupils, there is created a continuing tradition of ideas and attitudes and habitual responses that has a life of its own. It is this continuing tradition that gives to a university its corporate character or personality -- that intangible but living and dynamic influence which is the richest and most durable gift any university can confer upon those who come to it for instruction and guidance."

Becker goes on to relate the story of the well-known professor of history: "passionate defender of majority rule, who, foreseeing that he would be outvoted in the faculty on the question of the location of Risley Hall, declared with emotion that he felt so strongly on the subject that he thought he ought to have two votes."

Dale Corson's Cornell also had its share of colorful and passionate characters, not all of whom comported themselves with the decorum and civility that was expected in Becker's day. But Dale understood, far better than most, what it takes to make a great university: a strong and "otherwise-thinking" faculty with deep loyalty to the university, a willingness to take students seriously, and above all, a commitment to academic freedom, to informed debate, and a critical spirit, which recognizes differences of opinion not as disasters, but as opportunities for dialogue that can lead to new understanding. Here is a physicist and an academic leader with the sensitivities and the sensibilities of a humanist.

I want to argue that many of the qualities that Dale Corson embodies will remain central to the success of America's research universities in the 21st Century, even as we move into an era of large and rapid change. And I will argue that, though science will make remarkable discoveries and many headlines in the new century, the humanities will be crucial to understanding, preserving, and extending the essential qualities of a great university. They, perhaps more than any other constellation of

fields, can help guide us -- but only if they can reclaim their central place within the university and return to purposes that are both broad and deep.

A Historical Perspective

But first, a bit of history. More than 50 years ago, as World War II was ending, President Franklin D. Roosevelt asked Vannevar Bush, who was then directing the federal Office of Scientific Research and Development, to suggest how science, which had contributed so dramatically to the Allied victory in World War II, could best serve the nation in the post-war era. Bush's report, *Science: The Endless Frontier*, completed after Roosevelt's death and delivered to his successor President Harry S. Truman, made the case that the federal government could best strengthen American industry by supporting basic research and developing scientific talent at American universities. *The Endless Frontier* set the stage for the development of the National Science Foundation and for a partnership between the federal government and American research universities that continues to this day. That partnership, which has endured for 50 years, has helped create great science at America's universities and made them the envy of the world.

Through this potent collaboration -- not only with NSF, but also with the National Institutes of Health, the Department of Energy, the Office of Naval Research, NASA and others --

American universities have pursued research and graduate teaching hand in hand, thus reaping the benefits of a remarkable synergy that cannot be found in government research laboratories or in liberal arts colleges without graduate and research programs. These universities now attract the best young minds from the entire world, and they have spawned the lion's share of Nobel Prizes and other research awards that testify to scientific leadership. Cornell has been a key player in the federal government-university research partnership and one of its major beneficiaries, as well as one of its major contributors.

Dale Corson played a major role in positioning Cornell for leadership in several important research areas, including materials science. Some 40 years ago, during a trip to Washington, he learned that the nuclear power industry was finding that materials didn't hold up in the high-radiation, high-temperature atmosphere of their reactors. In an article in *The Cornell Magazine*, Dale recalled, "I had a friend on the Atomic Energy Commission who told me what was going on. So I visited the AEC and talked to some of my old friends in the Defense Department. When I came back, I went straight to Day Hall and said, 'Here are the possibilities and here's what we ought to be doing.'" Cornell's Center for Materials Research, as well as the Wilson Laboratory, the Cornell High Energy Synchrotron Source, the Cornell Nanofabrication Facility, and other facilities continue to be recognized as national and world leaders in their fields. So productive was the university-government-industry partnership, as evidenced by Cornell's success, that when Dale Corson finished his term as president, he and Nellie moved to Washington, D.C., where he founded the Government University Industry Research Roundtable and led efforts to encourage more collaboration among those three sectors.

From 1950 to 1990, then, we saw an expanding university-government partnership and a healthy injection of industrial participation, from which American universities have benefitted enormously. But in the past 10 years -- from roughly 1990 to the present -- we have experienced a dramatic acceleration of this trend, owing to several concurrent developments.

Accelerating Revolutions in Science and Technology and in Global Capitalism

First of all, we are witnessing two simultaneous revolutions in science and technology: the computing and information science revolution and the communications revolution. It is true that these revolutions began well before 1990, but they have exploded in the last 10 years. Each is significant in its own right. But because they are mutually reinforcing, they have become incredibly powerful tools, with a huge capacity to create change. There is no need to rehearse the elements of these revolutions, but I think all of us would acknowledge their potency and their tremendous impact on universities and on every other part of society.

In particular, they are fueling a third force: the conversion of multinational companies into powerful and truly "transnational" corporations, and the consequent emergence of American economic dominance. We live at a time when global capitalism, as carried out by transnational corporations, has become the principal driver of nearly everyone's agenda -- from national governments making policy to individuals seeking jobs and their place in the world. The booming stock market of the past six years has created a huge amount of wealth in America. Transnational corporations such as Microsoft, Citigroup, GE, and Time-Warner are reshaping the economic geography of the United States and the world.

It is true that multinational corporations have been a feature of the global landscape for a century, but the old-style multinational corporations, were headquartered in the United States and sold most of their goods here. That made them accountable to the federal government to a considerable degree. In contrast, as Prof. Walter LaFeber notes in his recent book, *Michael Jordan and the New Global Capitalism*, the new transnationals have become so global – and so large -- that any one government has power over only a limited part of their operations. In fact, some have argued that the influence of global capitalism is so strong that it has supplanted the nation-state. Of the 100 largest economic units in the world today, fewer than half are nations.

The rise of global capitalism is helping to drive the revolutions in communications and computing, and those revolutions, in turn, are fueling each other and also the market economy. These movements are powerful and difficult for governments to control. In fact, governments are starting to join them, as evidenced by the recent repeal of the Glass-Steagall Act to permit companies to offer once-prohibited constellations of products and services under one roof.

It is not surprising that the rise of very large, merged corporations, with their global economic power and weight, is beginning to occasion anxiety and alarm among a lot of people. Hence the real and symbolic power of the events in Seattle last week. The World Trade Organization, a group few people paid attention to five years ago, met to develop ways to reduce barriers to global trade through negotiations largely shielded from public scrutiny. And while it was billed by the Clinton Administration as a way to showcase the benefits of free trade, it also showcased the fears that global capitalism is generating. More than 40,000 protesters, from more than 500 different organizations and from several countries, descended on Seattle to make their voices heard on issues ranging from environmental protection to human and worker rights. We have not seen that level of protest since the Vietnam War. There were representatives of organized labor – the teamsters, the United Steel Workers and the AFL-CIO. There were environmental groups like the Sierra Club and Friends of the Earth. There were farm organizations and fundamentalists and fringe groups ranging from the Ruckus Society to the Raging Grannies. They spanned the political spectrum -- from the far left to the far right. A great number of people seem uneasy about the implications of world trade, which, it is clear, is symbolic of, a surrogate for, triumphant global capitalism. That is what people were in Seattle to air their grievances about last week.

The Rise of the University-Industrial Complex

That, in turn, should give us pause, because universities have been willing participants in, and beneficiaries of, the scientific and economic revolutions which are generating so much economic momentum and power. By harnessing the two scientific revolutions and by hitching themselves to the global economic enterprise, research universities have met, and exceeded, the expectations of Vannevar Bush's *Endless Frontier*. We have linked ourselves directly and productively not only to government but to American industry and global capitalism. Research universities are among the most ardent and successful exponents of the computing-communications revolution. Because universities are heavily engaged in science, and because science, in many of its most exciting domains, requires large infusions of capital, we seek funds not only from governments, which used to provide almost all of what we needed, but also from corporate "partners." This process began several decades ago, but it is

accelerating and reaching maturity now, at the turn of the century.

Large research universities are thus becoming a major driver of economic development. Colleges and universities in the United States collected more than \$576 million in royalties from inventions licensed to industry in fiscal 1998 and were awarded more than 2,681 patents. And not only do our discoveries lead to patents and licenses as they have in the past, but now they are spawning start-up companies and partnering with corporations to produce and improve products and processes across a wide spectrum of commercial activity. We are expected by our states to be part of their economic development agenda, and we are, as a result, setting up research foundations, biotechnology centers, and incubator facilities on and off campus.

We have thus become **complicit** in the creation of a university-industrial complex that produces tangible benefits for universities and for American society at large. At the turn of the century and the millennium, universities and industries have become willing collaborators, with government playing a supporting role. We can expect the university-industrial complex to expand its influence as the Internet and other communication technologies make national borders transparent and make possible global exchange and collaboration in both teaching and research.

And we have only just begun. For-profit cyber-universities and other ventures, enabled by the Internet, are going to impact the university-industrial complex with a vengeance in the new millennium as universities and private industry team up to offer for-profit instruction on a global scale. University teaching using the Internet and other advanced communication technology is already raising troubling questions.

Many of you probably saw the front-page article in the November 22 *Wall Street Journal* about the Harvard Law Professor, Arthur Miller, who is embroiled in a dispute with his dean over a series of 11 lectures he videotaped last summer for use in a course offered by Concord University School of Law, an on-line degree granting entity set up by the Washington Post's Kaplan Educational Centers. Harvard contends that Prof. Miller is violating its policy that bars its faculty members from teaching at another university, without permission, during the academic year. Prof. Miller maintains that he isn't teaching, since he doesn't deal directly with students, and asks how his Internet involvement differs from freelance work he has done for television.

The Research University in the "Age of Money"

The rise of the university-industrial complex raises significant concerns about our role, about our very identity, as an independent discoverer and conveyor of knowledge. Have we, in fact, become part of the global entrepreneurial enterprise, a transnational corporation with many of the same attributes as companies like GE, Citigroup, and Microsoft?

In my view, the answer is "Yes, we have." The ascendancy of science and the rise of the university-industrial complex contributing to and serving the needs of global capitalism have many attractions and benefits on many levels. In fact, they are nearly irresistible for universities. Who can complain about a booming economy and expanding markets and the resources universities receive from them? And who can object when universities,

particularly land-grant universities like Cornell, contribute to economic development and technological advances?

But while we reap many advantages from the revolutions we are helping to drive, we must also be aware of the risks and the downsides. The research university is increasingly abandoning its historical role as independent thinker and critic and is embracing a new role as collaborator with, beneficiary of, and enabler of, government, business and industry.

As early as 1920, Max Weber saw universities becoming "state capitalist enterprises" in which free inquiry had given way to the production of knowledge useful to the state for economic or technological reasons, thereby helping to legitimize state authority. But what he envisioned then is trivial compared to what we see now.

Money has always been important to universities, but never so much as today in our information-based, highly competitive research and teaching environment. The revolutions in which we are ourselves complicit mean that the hallowed idea of the campus has just about disappeared. We are no longer "removed from the every-day nature of American life -- we are part of that life." We have been, in Bill Chace's words, "desanctified."

One of the risks of our new status is that we will be so driven by financial considerations that we make an unbalanced situation even more so by favoring the fields that attract resources and spawn economic activity, as opposed to fields that participate very little in economic development. James Engell, a Harvard professor, and Anthony Dangerfield, a Cornell Ph.D., wrote about "the market-model university" in an article entitled "Humanities in the Age of Money," which appeared not long ago in *Harvard Magazine*.

"In the Age of Money," they assert, "the royal road to success [in the university] is to offer at least one of the following:

- A Promise of Money. That is, the field is popularly linked to improved chances of securing an occupation or profession that promises above-average lifetime earnings.
- A Knowledge of Money – either practical or theoretical, as in the study of fiscal, business, financial or economic matters.
- A Source of Money – such as support from research contracts, federal grants, corporate underwriting or other external sources."

This formulation may be a little glib, but I cannot argue that it is altogether wrong. The humanities – with rare exceptions – meet none of Engell's and Dangerfield's criteria, and, therefore, have, in their words, lost "respect, students, and, yes, money."

Viewed from any perspective, the humanities have fallen behind their more worldly disciplinary cousins in the contemporary university. We could ignore this trend altogether, or simply lament it and move along, confident that the pragmatic disciplines in the university will prosper whatever happens to the humanities. That would be, in my view, a tragic error, for universities and for society at large.

In his new book, *American Culture, American Tastes*, Cornell historian Michael Kammen quotes a revealing statement by the Council on Library Resources in 1985:

Ways must be found to assure continuing attention for those aspects of culture and learning that are important but, in a commercial sense, not necessarily in fashion. . . . Uncritical adherence to the concept of information as a commodity will distort the agendas of institutions and disciplines alike. . . . Public interest in the principle of open access must appropriately influence the structure of the information system and its components. It is certain that the information needs of society cannot be defined by the marketplace alone.

The Centrality of the Humanities in the New Millennium

The humanities remain central to research universities for several compelling and interrelated reasons: First, the humanities play a crucial role as the keepers and conveyors of culture in its many forms. The old aphorism is true: those who are ignorant of the past are indeed condemned to repeat it. It is essential in a democratic society that citizens be informed about the forces that have made them who they are.

Second, the humanities, in the past 25 years or so, have opened our eyes to formerly marginalized cultures and led in the development of gender studies and ethnic studies, which have enlarged the worldview of all of us. And while these fields have generated a certain amount of contentiousness within the academy and in political life, those earning university degrees today are far more capable of broad thinking than those who graduated 25 years ago.

Third, the humanities, and the arts, help mediate between high culture and mass culture, between elitism and populism. They thus expand our cultural reach, address problems of social structures, and raise enduring questions about what is worthy of our students' study.

Fourth, the humanities have become especially important, given what we have spent the past 20 minutes talking about. Humanists, more than other scholars, have historically looked for insights in other areas of endeavor and used them to inform judgments of human value, relevance, and historical significance. As James Engell has pointed out, "The humanities absorb and interpret the results of science, knowledge, and technology for our inner lives, values, and ideals."

Humanists give us not only a greater depth of knowledge and understanding for its own sake; they are also catalysts for change. "It has been the province of the humanities to preserve in order to reform," Engell writes, "to pay attention, even homage, to the past, but to criticize what we inherit, calibrating the fact that social and individual lives change in the present, and that the education of character, the shaping of society, balance what has been known with the pressure of what is discovered. The humanities openly cherish and brazenly criticize and see no contradiction in the two."

In the Age of Money, the commodification of nearly everything, and **entirely** too much information, we desperately need **critique** -- informed, disinterested, ethically-based, with the eye fixed steadily on long-term consequences. We require this critique for the global society,

and, in particular, for research universities themselves.

The humanities, ever since Socrates, have had not only a critical method, but a critical **spirit**, a mind set upon argument, antithesis, an urge, as Becker put it, to think "otherwise." As universities speed into the new millennium on the backs of government and global corporations, they need to ask where they are going. A critique of global culture should come not only from Luddites, fundamentalists, trade unions and Friends of the Earth; it should come from academic critics who think rationally and carefully about "why," not just about "how."

Finally, the arts and humanities perform a deep and essential role that goes to the heart of universities, and to the heart of individual women and men. As Max Weber argued in "Science as a Vocation": "Scientific work is chained to the course of progress; whereas in the realm of art there is no progress in the same sense. . . ."

We generally see this as a problem, perhaps **the** problem for the arts and humanities. But as Weber goes on to say, "A work of art which is genuine 'fulfillment' is never surpassed; it will never be antiquated. Individuals may differ in appreciating the personal significance of works of art, but no one will ever be able to say of such a work that it is outstripped by another work which is also 'fulfillment.'"

A work of art or literature, when "read" by an informed observer, contains within itself a kind of knowledge that is different from other kinds that depend upon the incremental buildup of information: it has a human, moral dimension at its center.

The Development of Moral Knowledge

As W. Robert Connor, director of the National Humanities Center, has written ("Moral Knowledge in the Modern University," *Ideas* , Vol. 6., No. 1), moral knowledge differs in fundamental ways from knowledge of the natural world. It is not of a body of facts or generalizations, but rather an activity, "ongoing, constantly reacting to experience, monitoring responses, contemplating alternatives, seeking ways to understand how things appear to affect others, confirming or revising patterns of actions and habits of the heart, searching for ways to change . . . It is, in other words, a heuristic, a way of finding out, rather than a content or a set of rigid moral laws." It requires imagination as well as logic. "There are methods that work," Connor notes, "but the knowledge can never be totally separated from the practice."

Moral knowledge develops very slowly. While it is never actually stagnant, "glacial" might be a fair description of its pace. It grows, Connor writes, "through a slow, sometimes agonizing examination of individual cases, in the hope of eliminating obfuscatory and tendentious language, cutting through self-deception, and trying to weigh alternative outcomes."

It is informed through studying history, reading a poem or novel, attending a play, looking at a painting, or listening to music, all of which help us imagine what it might be like to have a life different from our own. History and literature are particularly well-suited to developing a moral imagination because they challenge us to examine characters, both real and imagined, who confront difficult choices, and to reflect on how those characters behave.

As Mike Abrams has said, "The necessity, vitality, and vexatiousness of literary and other humanistic studies lies in the fact that they raise and reraise questions about the concerns we live by, to which they offer and reoffer answers that, however strongly supported, turn out never to be the last word."

Implications for Undergraduate Education

In the final analysis, the development of moral knowledge demands that each of us answer the ultimate Socratic question: "Who am I, and what should I do with my life."

In universities, we must remember, a major part of our obligation is to help 18year-olds answer that question. In so doing, the example of the teacher is critical. As Alexander Nehamas of Princeton has written: "Teachers have to embody the principles that we are to teach our students. . . Socrates was great because he did not just have theories -- he lived and died for them. His power comes from being able to appear as a believable and admirable human type, not just because he claimed that reason is important."

In recent years many of us have lamented the quality and level of our public discourse. This is not simply a complaint about scandals and gaffes; it is a deep concern about the increasingly superficial, sound bite, public polling approach to complex issues we see in our public debates, in our political campaigns, and in our broadcast media generally. As the issues that confront us become more complex, our rhetoric becomes more simplistic. All of us are properly worried about the seemingly irresistible tide of materialism and the concomitant decline of intellectual life in America.

We see these trends even on college campuses, where undergraduate life is often a series of formal academic challenges followed by a mad-dash seeking for relief in the form of games, drink and social activity. That is why Cornell, along with a few of its peers, is embarked on a program to raise the level of the undergraduate experience by focusing attention upon the quality of that experience in everyday life. As the "Report on the State of the Humanities at Cornell" well said last year, Cornell "should attempt a fundamental reorientation of undergraduate culture in a more intellectually challenging direction, and the humanities have a central role to play in the creation of an improved climate for undergraduate life at Cornell. Such a reorientation is a major undertaking, and it will require commitment and a sense of direction."

Walt Whitman captured the spirit of what needs to be done in a memorable formulation:

Books are to be called for and supplied on the assumption that the process of reading is not a half-sleep, but, in the highest sense, a gymnast's struggle; that the reader is to do something for himself, must be on the alert, must himself or herself construct indeed the poem, argument, history, metaphysical essay -- the texts furnishing the hints, the clue, the start of the framework. Not the book so much needs to be the complete thing, but the reader of the book does. That was to make a nation of supple and athletic minds, well-trained, intuitive, used to depend on themselves and not on a few coteries of writers.

In the age of transnational corporations and global capitalism, remarkable scientific and technological progress, the humanities have a more central place than ever in our struggle to become whole. It is time for the humanities themselves to shake off the ever-increasing specialization that has not served them nearly as well as it has served the sciences, and to reclaim the broad and deep perspective, the personal example, and the integrating role, on which the development of moral knowledge -- and of morally grounded 18-year-olds -- depends.

Only then can we insure that we will maintain what Carl Becker called "the essential quality of a great university," its character and personality.

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