

I understand now what people mean when they say winning an award is humbling, as I look out into this audience full of highly talented and dedicated teachers. My thanks to colleagues and to the College. Thanks in particular to Valerie Sayers, former chair of my Department not only for her nomination and support but for making it possible, along with Dean John McGreevy, for me to teach one of my annual courses in the minor in Sustainability Studies. And to the Sheedy Award committee for recognizing the relevance of work partly outside this College.

I want to thank two colleagues from the College of Science, who are chiefly responsible for building the Sustainability Minor and with whom I've had the privilege of collaborating over the last four years: Jessica Hellmann of Biology and Tony Serianni of Chemistry. I also want to thank colleagues within this College with whom I've gotten to work: Andy Weigert of Sociology and Celia Deane-Drummond of Theology. And while I'm thanking, I thank my wife Kate, who has never dissuaded me from taking on new teaching, even though she must have known it would inevitably mean listening to even more fretting about being underprepared, and to my son Ben, from whom I have learned more than he knows, and who has travelled here from Pittsburgh to be with us, giving up many billable hours in doing so.

It seems much more than a decade since we moved to Notre Dame. Emory University, where I had taught for more than two decades, is like Notre Dame in many of its academic achievements and aspirations; but there are a few differences. I limit myself to two: Emory is a largely non-religious university without a football team. Notre Dame is a university where football is a religion, and religion is a contact sport.

When Valerie Sayers and Jim Brockmole, the acting UG Dean, came together to my office last spring to tell me that I had won the Sheedy Award I was astonished, eventually blurting out, "I'm speechless." Without missing a beat, Jim said "Not for long," referring to this event. I thought "not for long" was pretty funny. The first time. Then I began to hear that phrase again when I asked colleagues *how* I should address the faculty.

In any event, as I understand the occasion, I've been invited to speak for about 25 minutes and you've been invited to listen, and, to quote Adlai Stevenson, I very much hope we shall finish at the same time.

Were this talk to be about my pedagogical theory it would conclude a few seconds from now. All I have to say theoretically is that good college teaching rests on being genuinely interested in one's subject and on being genuinely interested in the intellectual growth of young adults. Knowing nothing more than that, I will not presume to speak to all of you about *how* to teach.

Instead, I will use this opportunity to reflect on some of *what* we teach and some of what we might teach as we move into the future. My subject will be Teaching the Future.

But before giving up entirely on pedagogical advice, I do want to say one thing more about how to succeed in teaching: have some great teachers. One of mine, the most influential of mine, Brother Gerry Molyneaux, was my teacher in the 10<sup>th</sup> and 12<sup>th</sup> grades, for English, Latin, Religion, at LaSalle High, a Christian Brothers school in Cumberland, Maryland. Without Brother Gerry's influence and inspiration I simply would not be with you here today. It is deeply gratifying to have Brother Gerry with us and to introduce him to you.

Brother Gerry, only a few years older than the Appalachian ruffians he was sent to subdue, was, I now realize, already plotting his escape to higher education. During the summers he was completing a master's degree here at Notre Dame and would soon go on to the University of Wisconsin to earn a PhD in film studies. Since then he has spent a rich career at LaSalle University, and has published books on Charlie Chaplin, Jimmy Stewart, Gregory Peck, and John Sayles. It was Brother Gerry who taught us, among so much else, that an essay submitted in black ink could come back bearing more red ink, much of it forming words like *vague*, *verbose*, *clichéd*, *stilted*, *awk* (for *awkward*), *aargh* (for *aargh!*), and sometimes simply *good grief*. (I am relieved now to see that he is not taking notes in red.)

### **The Liberal Arts and telling the truth**

How should we be thinking about liberal education in the Anthropocene Academy? How might, or perhaps should, study in the humanities change as we understand more fully that our species is now a major planetary force, that, environmentally speaking, the traditional distinction between humanity and nature is growing indistinct?

Two fundamental goals of liberal education are to help students become better able to tell the truth and better equipped for the long-term future—educated, we like to say, for life. The implications of both “tell the truth” and “for life” are changing as consciousness of living in the Anthropocene era deepens. When more and more professors recognize that human culture is now one of the great planetary forces of “nature,” we need to rearticulate our liberal arts missions.

To *tell* the truth relates to educational goals in at least three senses. First is telling as discerning, that is, recognizing and discriminating features of reality in the ways that comprise the various disciplines of the liberal arts.

The second sense is telling as communicating. Liberal arts education should increase students' capacity for revealing what they think to others, through writing and speaking, ever more effectively. A third sense of *tell*, now archaic in everyday speech but worth recalling, means to

count, number, or reckon. This sense points to the importance of quantitative reasoning and methods in the enterprise of finding and relating truth. Finally, we can think of *tell* as counting in yet another sense: to matter or to count for something. We want our students to be able not only to find the truth but to find the truth telling.

### **The Human Sciences, or the Sciences of Meaning**

Of the humanities I speak because they are my academic home, but I use the term broadly to include all of us in this College whose studies center on human being and making. Perhaps we need a term like the human sciences.

Sometimes when the humanities are distinguished from the sciences, the fact/value split is given more credence than it merits. Thus we can find ourselves saying—or letting others say—something like, “the sciences have the facts but we humanists have the values.” This is too crude. Not only do scientists have values—some of my best friends are scientists!—but science is of course conducted according to values. And humanists really do value facts. But this opposition of facts and values misleads in a subtler way because it leaves out a crucial middle term, *meaning*.

I will speak, then, of the humanities in the broad sense as the sciences of meaning. Putting the emphasis on the study of meaning reminds us, I think, of how enterprises ranging from an introductory language course, or English composition, share a foundation with studying analytic philosophy, historiography, or critical hermeneutics. It reminds us that the appetite for finding meaning in our lives is merely broader than, not distinct from, the drive to find meaning in cultural artifacts, in texts, or in social institutions. From ethics to hermeneutics, the interpretive urge to get it right, to understand, through intellectual rigor and imaginative projection, and to appreciate the other, connects our studies.

One of the reasons, no doubt, why the humanities have thus far fared well at Notre Dame and other Catholic universities, flows from the Church’s rich tradition of sophisticated and cosmopolitan hermeneutics, a tradition suspicious of fundamentalism and literalism.

Humanists are concerned with actions, not simply events: actions being related to intentions, even when the actions are, we might say, overdetermined, or the intentions, we might also say, unconscious. Events happen, but people perform actions. It is the humanities’ concern with actions over events that might make us feel the inadequacy of the definition of history given by the Colin Farrell character, Ray, in the film *In Bruges*. When his older partner Ken asks why he has no interest in exploring their historic surroundings, Ray says, “I used to hate History, didn’t you? It’s all just a load of stuff that’s already happened.”

With the centrality of intention to the humanities in mind, we might distinguish actions from *stuff that's happened*, or *events*. I include in the humanities, as suggested earlier, all of our colleagues in the social sciences interested, at least part of the time, in intentional action and in introspection and in empathetic identification as ways of knowing.

So here I want simply to stress the inescapable ethical and interpersonal dimensions of humanistic inquiry, before going on to suggest that the humanities are also changing somewhat, in ways we are just beginning to feel.

### **Blurring of found world/made world in Anthropocene era**

The awarenesses of our contemporary moment have complicated one self-construct of the humanities, probably permanently. The traditional idea, older than Vico, that the natural sciences study the found world and the humanities the made world—the world of human artifacts and institutions—rests on a division that has become blurred in the Anthropocene era, that is, the stage in which human activity is now seen as significantly shaping the hitherto non-human world. Some would date the beginning of the Anthropocene thousands of years ago, with the rise of agriculture, but the more common dating is with the Industrial Revolution in the late 18<sup>th</sup> century. That is the baseline often used in discussions of the rise of greenhouse gas carbon dioxide in the atmosphere, from a level of about 280 ppm in the mid 18<sup>th</sup> century to 400 ppm today. Others might put the really significant beginning of the Anthropocene within the last six or seven decades, the period from about 1950 on that is often called the Great Acceleration, and in which most of that increase in CO<sup>2</sup> levels has occurred—and virtually everything else in all those hockey-stick-shaped graphs.

Human population and human economic activity have especially increased. Human population, which had not reached one billion until about 1820, was just a little over two billion at the end of World War II. Members of my generation may be the first to see the world's population quadruple in their lifetimes—at least the first since Noah's family. Our current population of 7.2 billion people is often projected to rise to a little over 9 billion by later this century and then to level off. A recent article in *Science* magazine, however, argues that population growth is unlikely to stabilize in this century without unprecedented decreases in fertility rates, thus making more likely a population of between 11 and 12 billion by the end of the century.

In any event, at current rates, each day the earth gains about 200,000 people and loses about 35,000 acres of forest. If like me, you need images to go with numbers, imagine Notre Dame stadium filled, then filled again, then half again, and we have about 200,000 people. Next, imagine all of our campus, 1,250 acres, and now try to multiply that image 28 times, and we get the rough area of forest to disappear by 4:00 p.m. tomorrow.

How these facts—human population and environmental impacts—relate to each other would make an ideal question with which to begin a set of general education courses. The significance of these numbers, their connections, and their relations to the extinction of plants and animals, mean temperatures, and ocean acidification raise issues that are complex, no doubt disputed, pregnant with ethical problems, and richly historical—in short, issues that are academic in the highest sense.

### **Academic responsibility in the Anthropocene**

The awareness of human impacts on global systems necessarily changes much in how we think about ourselves as humans in relation to the rest of creation, and it complicates common-sense ideas of responsibility, even as such thoughts tend to be repressed in our daily routines. Charles Dudley Warner’s remark that “Everybody talks about the weather but nobody does anything about it,” could be restated: “Nobody talks about the climate but everybody does something about it.”

“Nobody” is an overstatement, of course. Hundreds of articles, books, white papers, and international reports have appeared over the last two decades, but the question is, “How should all this knowledge be making more of a difference in our teaching?” I came to study and teach literature out of a love of linguistic beauty and historical curiosity about the changing “climates” in which it was produced—climates in the metaphorical way we tended until recently to use the word. I would rather not talk with students about literal climate change or other problems contributing to and flowing from it. But in these critical decades the humanities must help us think not only about the achievements of individuals but about humanity in the world.

Teaching is always about the future, even for those of us who do a lot of commuting to and from the past; but increasingly it seems to me that teaching the future must include talking thoughtfully with our students about climate change and other unprecedented environmental crises that will affect their lives. And that if we professors do not do so, we risk creating an alternative reality, building an educational theme park rather than a great university. The first part of Notre Dame’s three-fold aspiration is “to offer an unsurpassed undergraduate education.” In one sense, “unsurpassed” means *as good as or better than any other college or university*. But we must also want it to mean *not surpassed by reality*.

Five years ago, shortly after the financial crisis of 2008, Harvard president Drew Gilpin Faust, wrote of “The Crisis of the Universities” in the *New York Times*:

At this moment in our history, universities might well ask if they have in fact done enough to raise the deep and unsettling questions necessary to any society. As the world

indulged in a bubble of false prosperity and excessive materialism, should universities—in their research, teaching and writing—have made greater efforts to expose the patterns of risk and denial? Should universities have presented a firmer counterweight to economic irresponsibility? Have universities become too captive to the immediate and worldly purposes they serve? Has the market model become the fundamental and defining identity of higher education?

The questions that President Faust raised remain and should be extended into an ecological register: Should universities make greater efforts to expose the patterns of ecological risk and denial? Should universities present a firmer counterweight to environmental irresponsibility? Has the model of growth and productivity become the fundamental and defining identity of higher education?

### **Toward imagining the Anthropocene Academy**

Astrophysicist Brian Schmidt, a 2011 Nobel laureate, said recently that, "We are poised to do more damage to the Earth in the next 35 years than we have done in the last 1,000."

We can readily imagine that 35 years from now, this university—which will include many of you who are in the early stage of your careers—will be quite different; but we have more trouble of course imagining just how. As another physicist, Niels Bohr said, "Prediction is very difficult, especially about the future." Still, it is hard not to wonder, "What sort of mid-century environment will face the students, faculty, administration, and president of Notre Dame—whoever he or she might be?"

We need not try to project the future in detail to recognize some necessary first steps in rethinking our pedagogical contract with the young. Much has been written in recent years about the growing burden of financial debt as students borrow larger amounts to pay for their educations. But too little discussion is heard about the ecological-economic debt they face. How do we bring this overdue conversation to the center of the academy?

We can begin with one of the most widely shared liberal arts goals expressed in college mission statements: to educate civic leaders. We will need a more ecologically conceived globalism as well as a more deeply planetary sense of "responsible citizenship" to move ahead. The ultimate aim of a Notre Dame education, in the genuinely fine language of our mission statement, is "to create a sense of human solidarity and concern for the common good that will bear fruit as learning becomes service to justice." In the Anthropocene Academy, we need to think of the "common good" as planetary as well as communitarian, and, "learning in the service of justice" must include *intergenerational* justice, lest it eventually mean little more than preparing students for law school.

Responsibly drawing the connections between carbon emissions and teaching missions does not mean abandoning what we have been teaching in the liberal arts. It is not only more feasible but in most cases more intellectually sound to reinterpret some of our aims and offerings than to replace them.

If the customary separation of natural sciences from humanities and social sciences has become intellectually untenable in the Anthropocene Academy, then thinking broadly about anthropogenesis points toward the need for more ecologically-inflected humanities and social science courses of many kinds—and for more science courses designed around ethical problems and policy challenges. The point would not be to turn every course into “Environmental X” or “Y and Climate Change” but to incorporate environmental awareness into a significant range of existing courses.

Some ambitious integrations of environmental science and humanities and social science courses are taking place all over the country, but making such practices more common and more rigorous requires enabling large numbers of faculty members to learn about each other’s subjects. This is an ideal time for more team-teaching and course development by scientists and non-scientists. Such collaboration can be valuable under nearly any circumstances, but it will be most rewarding if complemented by internally sponsored study leaves and reduced teaching assignments to allow participation in faculty seminars—seminars ideally populated by roughly equal numbers of natural scientists, social scientists, and humanists.

Let me pause here to acknowledge that I am proposing something that will cost money—and that we are fortunate to have an enlightened provost and dean who will surely see the value of such an investment. The point of internally funded leaves is to recognize that some study projects, for example, learning the basics of a new discipline, may be vital to our educational mission but would have no realistic chance of competing in the usual disciplinary world of external grants.

In these last 3 or 4 minutes, I offer a few thoughts about academic responsibility in the Anthropocene Academy.

If we are to talk differently to students we need to talk differently among ourselves. For we tend to say one set of truths to each other professionally—while reading and perhaps writing articles about unparalleled crises—and rehearse others on campus, where business-as-usual legitimation and instruction still dominate. But we can’t afford to maintain two worlds, one for what we know, and one for what we do.

Teachers who think steadily about environmental matters tend to feel mystified by the general absence of urgency around them. The lack of urgency can be partly attributed to institutional inertia, routinized busy-ness, academic careerism, and so on. But it has an intellectual cause as well. We worry, properly, about turning instruction into advocacy. And some rationales for the liberal arts directly oppose the “academic” to the “urgent.” This tendency is epitomized by Stanley Fish’s *Save the World on Your Own Time*, where Fish contends that the proper way to “academicize a topic is to detach it from the context of its real world urgency.” Yet the academic formalism and professional complacency underlying this habit are no longer tenable. What needs saving is not “the world” in some extrinsic sense, and not “the planet” (which could do fine without us), but the human civilizations and traditions that we teach and in which our intellectual values have arisen, including higher education and the university itself. Saving the world academically means saving Civilization As We Teach It.

In a time of global environmental emergency, the liberal arts must provide education for citizenship on a planetary scale or slowly become a set of museum exhibits. We know we have entered a new educational era when a noted environmental philosopher, Holmes Rolston, counsels us to “become wiser than Socrates” and another, Dale Jamieson, wonders “whether morality has more than met its match in the Anthropocene.” Rolston means that contemporary ethics needs to include environmental as well as interpersonal relations, and Jamieson means that the traditional moral principles fitted for a world of proximate interactions may not be enough to guide us as global citizens.

This moment challenges us to ground our educational ideals anew and ultimately with more honesty. Jamieson’s most recent account, *Reason in a Dark Time: Why the Struggle against Climate Change Failed—and What It Means for our Future* (2014), concludes that we are approaching a “world that increasingly fails to resemble the one in which we came to consciousness.” In the new world, the “biota will change, diversity will diminish, weather will be less stable, skies will be different, and it will become increasingly difficult to relate to the old stories and tales.” Increasingly difficult, not impossible.

This rupture with the past brings the Anthropocene Academy’s mission into focus. Global changes affecting plants, animals, biodiversity, climate, atmosphere, cultural traditions, narratives, and interpretations: here are the materials for profoundly interdisciplinary learning and teaching. A newly rationalized and energized liberal arts education can be one in which we and our students get ever better at telling the truth.

My fellow teachers, for your intellectual hospitality, your thoughtful companionship, and, today, for your patience, thank you.