I’m delighted to be here at the University of California, Davis whose extraordinary work spans from strength in culture to strength in viticulture. As Nobel Prize-winning scientist Alexander Fleming once said; “Penicillin cures, but wine makes people happy.”

When Chancellor Katehi invited me to travel from the rocky cold coast of New England to visit this beautiful campus, and the weather has just been extraordinary today—what a greeting!—I was very happy indeed. And that’s even before the wine reception, so it is my honor to be with you today.

The title of my talk “Liberty and Learning” is taken from James Madison’s 1822 letter to W. T.
Barry, a Kentucky Congressman, Senator; and Andrew Jackson, Postmaster General. In praising the State of Kentucky’s new plan for a general system of public education, Madison wrote, “What spectacle can be more edifying or more seasonable than that of liberty and learning, each leaning on the other for their mutual and surest support?”

Like so many of his revolutionary colleagues including his friend and mentor Thomas Jefferson and his political rival John Adams, Madison believed that “a well-rounded education and a more general diffusion of knowledge would be the best security against crafty and dangerous encroachments on the public liberty.”

To preserve the public liberty, Madison also championed education as the bedrock of democracy and argued for the creation of learned institutions which he believed ought to be the favorite objects with all people.

One such learned institution, the American Academy of Arts and Sciences, was founded in 1780 by John Adams, James Bowdoin, John Hancock, and several of Madison’s revolutionary colleagues precisely for the purpose of advancing “the wealth, peace, independence, and happiness” of the young republic.

Like Madison, the founders of the American Academy certainly understood the importance of instrumental learning. In its early years, the Academy assisted in the pursuit of useful knowledge by publishing surveys of the soils, plants, and minerals of North America, the raw materials that would be the basis for America’s growth and prosperity, but they also left a legacy of support for curiosity-driven scholarship that continues to inspire work across this nation and the innovations that we draw from.

“As you all know, curiosity-driven research and education is an easy target for policymakers in times of fiscal constraint.”

Adams, Jefferson, Franklin and Bowdoin were practical men. They were lawyers, businessmen, journalists, statesmen. Adams was also a farmer. I think he would have loved it out here. And they were very practical. They understood the importance of imagination in the arts as well as in sciences to the national enterprise, and they brought this conviction to their government work which helped to shape democracy.

The American Academy was founded before there was a country. In fact, in 1780, they were just working on the Constitution, both of the United States and of Massachusetts. Adams wrote into the Constitution of Massachusetts, which he was able to be the most persuasive author, that every state should have an academy. He wanted to get into the American Constitution that every state should have an academy. That didn’t quite make it into the American Constitution, but he was able to keep it in the Massachusetts Constitution.

I’ve been thinking about these men and their commitment to curiosity, to the sciences and the
In recent months, general knowledge has been challenged from several angles. Congress has debated the efficacy of funding the social sciences and very recently restricted the National Science Foundation for projects that “do not promote national security or the economic interests of the United States.” One hopes that this will change in successive administrations, but it is a very instrumental and narrow definition that is being imposed on the National Science Foundation, and there is some fear that it will also be imposed on the National Institutes of Health. It flies in the face of the peer-reviewed, broader, curiosity-driven ways that we have carried out science and social sciences in this country.

Other signs that alarm me: some state governors have encouraged college students to avoid humanistic and social scientific disciplines. This raises to the state that a governor can say in one state that he thought students should be charged more to study history because it was not going to lead to a useful career.

Some states have even instituted laws requiring colleges to post the incomes of their students one year after graduation as if the immediate benefit of a college education were that value one year out of college. I wouldn’t have done very well if that was the way that my life had been evaluated. I don’t know how any of you feel about that.

Now of course the public’s reasonable desire for accountability is something that is being spoken about more and more with the high cost of education, but this kind of calculation one year out of college is very misleading and even a self-defeating set of measures for education, just as measuring teachers K-12 on the performance of their students can have dire effects on the curriculum.

“America’s technical and cultural preeminence was not based on such a constricted and impoverished view of intellectual enterprise.”

Vannevar Bush, as Chairman of the National Defense Research Committee and Director of the Office of Scientific Research and Development understood the importance of research to the economic and political well-being of this nation. He led or oversaw several unique major research projects designated specifically to ensure that America would prevail, most notably the Manhattan Project. But Bush also recognized that knowledge for the sake of understanding was the most important stimulus of discovery. Unpredictable, inconvenient, occasionally inefficient, such research and scholarship is the key to innovation as Archimedes, Isaac Newton and Alexander Fleming all would testify.

In 1967, well after the World War II period in which Bush not only worked on the Manhattan Project, but also his work led to the creation of the National Science Foundation, he published a reflective and sobering book with the provocative title Science is Not Enough in which he wrote, “Knowledge for the sake of understanding, not merely to prevail, that is the essence of our being. None can define its limits or set its ultimate boundaries.”

Even as American Academy projects gather evidence on the practical importance of advanced research for government, industry, and civic culture, they also champion the pursuit of knowledge as do most universities in this country. Knowledge for the sake of understanding as well as knowledge for prosperity that’s more direct.
Earlier this month, The Academy released a new report, *ARISE II: Unleashing America’s Research and Innovation Enterprise*. ARISE stands for Advancing Research in Science and Engineering. The report advocates for greater integration of theories, concepts, and applications from multiple scientific disciplines—biology, physics, medicine, engineering, computer science—to solve the complex problems of the 21st Century. It offers recommendations to foster collaborative research between academia, universities, and industry. Chancellor Katehi herself, as a fellow of the Academy, was an important part of that study. That study leads us now to how do we implement that study. An important challenge for all of us is how we will evaluate people who do interdisciplinary research. How will their careers move along the spectrum? These are new challenges to universities that I think none of us want to shrink back from.

Next month, the Academy’s Commission on the Humanities and Social Sciences will begin a multi-year public campaign to argue for the critical role of the humanities and social sciences to “achieve long-term national good for our intellectual and economic well-being for a stronger, more vibrant civil society and for the success of cultural diplomacy.”

As a student of the late ‘60s and early ‘70s, the notion that the humanities would take up the challenge of industry, economic well-being, and military diplomacy would have been something of a surprise, and yet it’s clear to me, and I hope to many of you, that you can’t argue for public support if you can’t make the case for the public good especially during constrained economic times.

Both of these projects, the ARISE project and the humanities project, advocate for the importance of research across the disciplines. Both acknowledge the need to combine disciplines, to merge them in new ways, to take the tools of science and the humanities to address grand challenges, and both also seek ways to nurture young talent and support senior faculty as they chart the frontiers of their fields together and make new alliances.

As some of you may know, the commission answers a bipartisan call from the United States Senators Lamar Alexander, a Republican of Tennessee, and Mark Warner, a Democrat of Virginia, and Representatives Tom Petri, Republican of Wisconsin, and David Price, Democrat of North Carolina.

Their call to the Academy was to outline “one of the top actions that Congress, state governments, universities, foundations, educators, individual benefactors, and others should take now to maintain national excellence in the humanities and social scientific scholarship, education to achieve long-term national goals for our intellectual and economic well-being, for a stronger, more vibrant civic society.”

Richard Brodhead, President of Duke University and a scholar of literature, and John Rowe, Chairman Emeritus of the Exelon Corporation, one of the nation’s leading energy utility companies, co-chair a distinguished group on the Commission.

Among the members of this commission are: Pauline Yu, Annette Gordon-Reed, and Tony Grafton from the humanities; social scientists Danielle Ireland, Donna Shalala, Kathleen Hall-Jamison; scientists and engineers Charles Vest, Norm Augustine, John Hennessey;
business leaders including Jim McNerney of Boeing and Roger Ferguson of TIAA-CREF; and leaders in the arts and media George Lucas, Ken Berman, John Lithgow, Billy Chan, and David Brooks—quite a large number of Californians represented in this group.

The commission members have been active and engaged in this work for over two years. They have also sponsored forums around the country to collect testimony about the importance of the humanities and social sciences to local and ethnic communities to advance research, to civic participation, to the education continuum, and to the nation’s defense and international relations.

Let me show you a few snippets.

Condoleezza Rice speaks on video: “The nature of human beings is to understand that we’ve had a past, to recognize that we are living in a present and to hope for a better future, and one has to therefore be able to connect one’s past to this present. And to have an anticipation of a better future, one has to know something about how human beings have addressed the big issues before us in the past, how they address them now, and what the future might look like. And so in a sense the humanities and the social sciences are the most human of inquiry, because we’re trying to understand that past, the relationship to the present, and the anticipation of the future.”
Colm Tóibín, Novelist and Professor of the Humanities at Columbia University, speaks on video: “Something that also really matters in America, where you can get students who are studying science who want to come into your literature class, that that still remains an aspect of the American academy which isn’t the case in Europe, and I think it’s something we really have to hold onto: the idea that just because you want to become a doctor does not mean that you don’t want to go down the corridor also and study the history of European paintings, and that does actually matter in America. If it were lost, I think it would an extraordinary loss not only for the American academy or for the individuals involved, but for the entire society.”

Chief Glenna Wallace, Eastern Shawnee Tribe of Oklahoma, speaks on video: “My tribe is known as a tribe of loss. In that loss, do we really realize what was taken away from us? In my opinion, it can be summarized in the word ‘humanities.’ We have found that our people are not able to hold jobs because, in many cases, they don’t know who they are, they don’t have an identity, they have had a spirit taken away from them. And our success with our people comes when we are able to give an identity back to them, when we are able to give that spirit back to them, when we are able to give the humanities and provide them.”

Gloria Estefan, musician, speaks on video: “My mom came to this country when we left Cuba. She was bringing her degree with her. They ripped it up at the airport and said that she was not taking even her education with her; however, it’s ridiculous because your education is not that piece of paper. It is what has made you, what has formed you, what all the immigrants that have come to this country have brought with them and the strengths from their particular cultures that continues to weave their way into the fabric of this amazing nation that is growing by the day. And with every immigrant that comes into this country we acquire their knowledge, their skills, their culture, and that adds to the amazing culture that already exists here.”

David Souter, Associate Justice of the United States Supreme Court (1990-2009), speaks on video: “Perhaps ultimately the point is the promotion of that kind of tolerance, that degree of healthy self-doubt which Learned Hand used to remind us of by quoting Oliver Cromwell in his statement to the Scots: ‘Consider that ye may be mistaken.’ In fact, as somebody reminded me as early as lunch today, that after all was what Learned Hand called ‘the spirit of liberty,’ and it’s the spirit of liberty that the humanities are here to promote.”

As a society, we tend to focus on bad news, and bad news is all around us. The humanities community has had to struggle with bad news for decades. I will give you a few factoids. One-third of all fourth graders in this country are reading even below a basic level of achievement. We do not compete well on international standards of reading. One-third of public high school students take history classes with teachers who are neither certified nor degreed in history. Those people who have advocated for STEM well over the past several years have pointed out that math teachers needed more training. Actually, history teachers are even less well prepared than our math teachers. Federal funding to support international training and education has been cut by 41% in four years, this at a time when we have been involved in wars in multiple sites around the world. We are not training people in language. We are not training people in area studies. We are running around looking for somebody who can translate a text because we’re not building it into either our primary, secondary, or advanced degree institutions.

The Academy commission has uncovered reasons for optimism nevertheless. There is an
interested public which is much broader and more diverse than they themselves thought. Over the past decades, many people in the humanities community looked at the scientific community and said “Well, they’ve got their act together. Everybody is talking about STEM. Everybody is talking about the importance of science and technology and we are being left off the page.” The importance of the commission is to mobilize and draw on an interested public to help move the policy community. You can’t just talk about the bad data and hope that somebody in Washington is going to say “Okay, we’ll fix it,” if nobody across the country is saying “it needs to be fixed.” We need to mobilize PTAs and libraries, cultural institutions, all of those institutions that you all love and benefit from and yes, business, government, and the military to help make our case.

Last October, Academy fellow Daniel Day Lewis introduced me to a young army veteran named Johnny Jones. Johnny is in his late 20s, comes from the rural South and lost both his legs in combat in Afghanistan. Daniel met Johnny while visiting Walter Reed Hospital while he was researching for his own role in Lincoln. As a result of that meeting, Johnny himself appeared in that moving hospital scene in the film, if you’ve seen the movie. Johnny’s duty in Afghanistan was to find and defuse IEDs; dangerous, heroic work based on the purest form of technical knowledge.

Daniel introduced us because Johnny is now interested in the humanities as a liberal studies major at Georgetown University. His military training taught him how to perform the tasks of his very dangerous assignment, but he will tell you modern soldiers are statesmen as well as technical experts. For this reason Johnny emphasized to me the importance of cultural knowledge, communication skills, historical perspective, and ethical reasoning for the modern military. He speaks eloquently about the importance of humanistic knowledge to his mission, and he said he only wished he had learned about the world in school before he enlisted.

I remember Johnny Jones whenever I hear a governor, a senator, a superintendent, a parent, or even a student question the importance of disciplines like anthropology or political science or history or the classics.

“The truth is we never know what piece of information will provide our security, our competitiveness or our individual happiness.”

We never know which skills our next job will require, and so we will always need experts, teachers, and researchers to move the nation forward, and even those who are fraught with the job problems of today—looking for new jobs after they’ve been laid off—often can draw on their own sense of history and knowledge and enjoyment of literature as they are thinking about retooling for another profession.

Since the publication of Rising Above the Gathering Storm in 2007, which was a report of the national academies, the STEM disciplines—science, technology, engineering and mathematics—have received necessary increases in funding and attention, but as Norm Augustine, former chairman of Lockheed Martin and head of the Gathering Storm report said at a recent meeting, “One cannot live by equations alone.” Norm, of course, as chairman of the Rising Above the Gathering Storm report, is one of the nation’s most influential reporters on science. He is also a member of the humanities commission and equally dedicated to that work. “One cannot live by equations alone.” Note I am not saying that this is a competition between STEM, the
humanities and social sciences; I’m saying this is an integrated problem. If you can’t read, you can’t do science. On the other hand, if you don’t understand the meaning of how the scientific enterprise proceeds, critical thinking, evidence, you’re not going to be able to be a good voter, so we need both together. Since that publication, the funding that STEM sciences have received has been impressive, but we have to find ways to also advocate for the humanities.

China and Singapore have discovered that a workforce trained in the humanities can be more creative and innovative. They are transforming their educational systems to include the study of literature and the arts. Peking University has even created a department of Western classics to better understand what the Chinese perceive as the bedrock of our economy and culture, and other nations are following. Even British colleges have, in recent years, rediscovered the liberal arts. The year King’s College London and University College London are both admitting undergraduates to new programs in the liberal arts. Why are we divesting from broad education when others who have envied our system of education for a century are moving in that direction? Is the way we’re going to be competitive, I ask you?

In a recent survey of the Association of American Colleges and Universities, 78% of employees responded that they preferred job applicants knowledgeable about global issues and societies and cultures outside the U.S. to train them for a global workforce. Eighty percent favored employees with strong written and oral communication skills, and 82% responded that they preferred employees with civic knowledge, skills and judgment. All of these are honed in the bedrock of the humanities. In other words, the humanities community has a world out there of allies, whether it’s our military or our business community, or our wish to be part of a competitive global environment, but those in the humanities community have got to join this argument, and I wonder if humanists themselves have been aggressive enough both to find a common voice and to work with these other constituents to argue that our senators and congressmen are missing something.

The Commission on the Humanities and Social Sciences and the campaign that will follow the release of the report will attempt to restore balance to the public conversation about American education. We are embarking on a journey that will not end with the report, but rather enunciate a set of principles that we’re calling on all of you to help us carry forward.

When you listen to some of the testimonies of earlier forums that the Academy held, I hope you’re inspired to think about what kind of forums you can hold right here at U.C. Davis, because we intend to work with humanities centers around the country and with other interested publics to try to get this conversation actively going in our society. The report is meant to be provocative of what would be lost if we didn’t have the humanities and social sciences.

Let me share with you a few basic principles of our work.

1) The humanities and social sciences provide Americans with the knowledge, skills and understanding they will need to thrive in a modern, increasingly complex, technologically-based society. For example, reading, writing, speaking, and analytic skills are the basis of career
flexibility and life-long knowledge. The knowledge of history, civics and social sciences will allow people to participate meaningfully in democracy, and without that knowledge, democracy cannot thrive. Think of the societies and countries when they were most eager not to have a democratic nation remove the university, remove the culture. Think of what is done subtly when we don’t fund culture and we don’t fund learning. It’s self-removal. It’s a very perverse idea.

2) The qualities of mind—problem solving, critical analysis and communication skills—are common to all disciplines. The humanities and social sciences equip the nation for leadership in an interconnected world. They teach us about ourselves and about others. They enable us to participate in the global economy that requires understanding of diverse languages and cultures and sensitivities to many perspectives. They make it possible for people around the world to work together to address issues such as environmental sustainability and global health.

3) State and federal research and education budgets are currently stretched to fund more programs with fewer dollars, and we need a wider community of philanthropic individuals and foundations to invest in the humanities and social sciences beyond government.

4) We need to bring the humanities communities together to argue for the importance of these disciplines, as I suggested earlier. Each organization within the complex tapestry of the humanities and social sciences has a message. I hope that we can find some common messages as well as our individual messages. Each organization has a role in advancing the recommendations of the report, and we need to find a way to bring the whole education continuum together, from teachers of preschool to those doing advanced research in universities and institutes of advanced knowledge.

“Not every humanist or social scientist needs to be a public intellectual, but scholars have got to address many audiences, and they need to find ways to justify their work to larger audiences.”

5) Teachers and scholars have to reevaluate the curriculum, pre-k through college, not in small boxes, but what are the competencies we hope young people will learn that they can build on to be more successful in high school, what do we hope that people learn in high school that will translate to college. We do a lot of costly remedial work in our country, which might be a place where we can actually being to save some money if we created a clear continuum between the sectors and welcomed more actively in some institutions those people who are teaching in the earlier years.

Finally, we need to engage with a broader public.

As historians Anthony Grafton and Jim Grossman, Executive Directors of the American Historical Association wrote in an influential essay, “No more plan B.” In other words, the academic community must not see the value of their advanced degree only in replicating themselves. There aren’t going to be a glut of jobs available to be filled. People going through these disciplines have the right for their own faculty to work with them to think about the other things they might profitably do and how the whole society will benefit from their
advanced training. We can no longer believe that our work is just reproduction, but also, as contributors to the public culture and the private sector, your humanities clusters here and at this center are valuable models of this kind of interdisciplinary work, and I applaud you for it and I think it's just the kind of thing that all undergraduates and graduate students will find a new sense of the value of their work and their disciplines. Most of all the commission wants to maintain the exemplary system of broad liberal arts education that is our nation’s greatest export and calls for increased support for humanistic and social science research in every field. The larger funding problem will not be solved by making louder requests where there is little inclination to and fewer dollars to give.

As my colleague and co-chair of the commission Dick Broad had said, “The slogan: we have a value and you are apparently just not able to understand it” is not a winner in the contest for public opinion.

Scholars in the humanities and social sciences must begin to learn from the biological and physical sciences that they have to make the case as STEM has for building over the last 50 years since the creation of the National Science Foundation—now it’s 63 years since that creation. This is not easy to do. The humanities and social sciences are, of course, the disciplines of debate and dissent, and we would not want it otherwise, but they abhor slogans.

“They cannot cure cancer or even blight in vines, but let us not forget that music and wine and letters make the most worthwhile life companions.”

As James Madison continued in his reflections on liberty and learning, “Throughout the civilized world, nations are courting the praise of fostering science and the useful arts.” Madison was concerned that if we were going to compete, young America with Europe, when he wrote these words, we would have to find a way to achieve what they were achieving in Europe. Today, we look to developments in China and other Asian nations, all of whom have acknowledged the benefits of our kind of work, and we cannot afford to lose what has already made us great.

Maureen Stanton, Vice Provost of Academic Affairs: Leslie, thank you. I’m sure I’m not the only person in this room who felt a visceral resonance with what you were saying, with many of the themes you presented today: the fundamental importance of curiosity-driven creative endeavor that is truly one of our unique human attributes. But also, you’re pushing us to get out of our comfort zones, to reach out not only to other disciplines, say from STEM disciplines into the arts and certainly the social sciences, but also from just trying to influence our fellow scholars to having an impact on society. We’re all incredibly grateful to the work that the American Academy of Arts and Sciences is doing to champion the importance of higher education while also changing us.

I come from a STEM background, and to me the notion that STEM can or should operate in any sort of isolation from the social sciences and humanities is hard to fathom. From just a biological or scientific standpoint, humanity is the most important ecological force on earth; it is changing the geochemistry of our planet, the evolution of every species on our plant. How can we possibly understand those processes unless we understand human beings and our social systems? Those are the domains of arts and humanities. So thank you; I think it’s an incredible message.
I also feel—and I want to come back to a theme you addressed in your talk, and that has to do with education on the K-12 level and how we need to reach out. I’ve called our current system the system “Leave No Child Untested.” And yet even as I feel things have gotten much worse, I think of my own childhood. I didn’t become a scientist because of science classes I had in junior high or high school. What they taught me about the scientific method sounded so incredibly dull and boring—who would ever want to do that? What was the role of creativity? Similarly, I didn’t feel I was well prepared for realizing how history teaches us about the future and that arts aren’t just decorative but they are probing ourselves. So, given that, I’d appreciate it if you’d talk to us a bit about what we you think we can or should do to help break down these comfort zones and break down these disciplinary boundaries for younger students and the teachers who are teaching them.

Leslie Berlowitz: In our commission report, we were very concerned with how each segment of the educational system lives within its own culture. So school teachers, many of whom have college and even master’s degrees to be school teachers, go out of the system and we no longer think of them as fellow academics trying to bring high school and then college the kind of people who can be successful in our institutions. They don’t even talk about the humanities in K-12.

The humanities are a higher education construction, I think, or a national construction when the NEH was created. In grammar school we talk about reading, we talk about social studies, which I think combines history and civics, although one of those awful factoids is that civics isn’t being taught in at least more than half of the states in this country. Foreign languages, which we consider part of the humanities, are absent in the schools now.
Each level of education, to some extent, is influenced by the one beyond it. If the medical schools stopped requiring organic chemistry as an entrance criterion, I wonder what would happen to the enrollment in organic chemistry? For years I always thought it was the organic chemist who stood between a child’s aspiration to be a doctor and their ability to get there, and I always wondered what criteria they were using, as the course always seemed beyond my ability.

Similarly, colleges some years ago gave up looking for foreign languages, so why are we surprised that high schools, hard put to meet their curriculum, would offer fewer foreign languages. If grammar schools could prepare the way, not in this endless “It’s STEM or…” but a series of competencies and literacies that people need to be successful, then I think we could work together on it. It would be interesting for a university curriculum committee to get a few high school teachers to come and chat about it. I would be interesting to have graduate school faculties talk candidly, not just in the disciplines of the humanities and social sciences, but in the medical and law and business schools about what these aspirations are.

I often hear the opposite of this. “Humanities are important, so our medical school has an ethics course,” or “Business is so important, we are even offering some intercultural courses.” That’s late. Medical schools should be down there encouraging K-12. The PTA, parents, should be looking for this in our schools. The arts are no longer in our schools.

I know I’m being rather optimistic, when I understand that the budgets of public education have been cut and many cities and states are so tied to the real estate taxes, and people are aging and as they age, they’re not interested in having higher real estate taxes so some group of five-year-olds will have arts in the school. But the long-term result of not giving that kind of opportunity to each next generation will create a very bifurcated society in which those people who have affluence will be able to provide some of these opportunities by taking their kids after school to museums, introducing the arts, supplementing the school. Most of the supplementing to schools I see around me are for sports. I see far less except if you come from certain cultures for foreign language or for other disciplinary ideas, and I think we’ve got to get back into our schools. We’ve got to have the public will that we will not be in a society where affluence creates a bifurcated society and an elitist group who have that kind of culture and the rest whose schools could afford it.

It comes back to really an economic… I don’t like to see teachers not have the opportunity to come to lectures. We run lectures at the Academy. Not every chair at every lecture is filled. Where are the school teachers coming to our lectures? They shouldn’t feel like they’re just guests because we’re having a take a teacher to lunch program, but take a teacher into our department, adopt them, care about them. It would be amazing what they could do.

Stanton: I think they must be so time-limited. I know I tried to do an outreach program on evolution about five or six years ago. We really worked hard to invite teachers from the Davis and Sacramento school district, and we couldn’t get any. I don’t know if how much of that is because they are just so busy. Their class sizes are huge, their workload is tremendous, and how much of it may be a perceived separation, that we’re being condescending somehow, or we expect that to be a one-way conversation rather than a two-way conversation. I think that’s tremendously important.
Berlowitz: Can you imagine a tenure committee having a high school teacher on it? That would be a two-way conversation!

Stanton: I’ve told many of my colleagues and many of my graduate students that if you really understand the importance of your work, you should be able to explain it to an intelligent fourth-grader. And that if you can distill it to that level, then you really have a better grasp of what you’re doing.

Berlowitz: And if we paid our school teachers adequately, and if we honored them adequately like some countries do, then those people who are finishing PhD’s in disciplines might feel very happy to be teaching as a career, which is what they said they wanted to do. But if you go into a school system where everything is meted out to you, and you’re not well paid, and you’re judged by somebody taking tests every week, then that’s not a profession that people want to go into. We’ve got to fix that somehow.

Stanton: Absolutely. Thinking about the work of the commission—what an amazing group. You read us a set of some of the 52 names—humanists, social scientists, business leaders. What were some of the other arguments that this diverse group of stakeholders made to really call for the importance of continued investment in humanities and social sciences?

Berlowitz: There was a lot of discussion about civics, and one of the interesting discussions was about what kind of a jury you would like if you suddenly found yourself being tried by your peers, and how you like it if they didn’t know how to think deductively, understand critically and logically the arguments and make a considered decision, and that training in civics and literacy and in the scientific method would be very helpful for jurists. I was very persuaded that I wouldn’t want to go before a jury that was emotional, but that made evidence-based decisions.

Stanton: You also mentioned something about George Lucas and the “whys” of technology.

Berlowitz: George Lucas said that technology teaches us how, and the humanities teaches why, but he talked very convincingly at commission meetings about the importance of learning history, because he said even cinema studies is based on knowing the history of the discipline of film as well as the history of our society. Anyone who has ever watched the beginning of the trilogy knows that in a far distant land Lucas was talking very much about the sweep of Western culture and history in modern terms.