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APA Panel – “What is the Future of Liberal Arts Education?”
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Good afternoon. I'm delighted to join the members of the APA and my distinguished co-panelists as we contemplate the future of liberal arts education.

We hear a lot of discussion these days about “disruptive innovation” or “disruptive technology.” It began in the corporate sector, where companies like Apple and Amazon created new products and services that turned entire industries on their heads. But the concept of “disruptive technology” is now part of the discussion in our colleges and universities, where the rise of MOOCs and other forms of technology-enhanced instruction are giving us new ways to teach and learn.

Some of you may be familiar with management guru Clay Christensen. In his “technology mudslide hypothesis,” Christensen argues that many industries and organizations fail simply because they are unable to keep up with the frenetic pace of change in technology. In Christensen's metaphor, trying to keep up is like trying to climb a mountain during a mudslide; you climb frantically just to stay in place, and if you pause for a second to catch your breath, the mudslide buries you.

In higher education, we are climbing through a mudslide now. University leaders understand the risk of falling behind, as our peers adopt new technologies that are transforming our industry. But we are also aware of *other* risks: the risk of compromising our residential-education programs by over-emphasizing online instruction; the risk of diluting our brands by offering our academic content for free to everyone, everywhere in the world; and so on. For all these reasons and many more, it's certainly true that technology is having a disruptive effect in higher education.

But I want to draw a distinction today between disruptive *technology* and disruptive *ideas*, because they are qualitatively different and they have profoundly different effects. In higher education, disruptive technology can lead to marketplace innovations, such as online-only universities and MOOCs; it can lead us, as teachers and scholars, to refine our methods of pedagogy and scholarship, often in productive ways; it can lead us to develop new fields of study, such as data science, to analyze the massive data sets that are by-products of these advances in technology.

Disruptive technology, in other words, can lead to modifications in academic content and delivery, additions to our curricula, and general changes in our *modus operandi* in higher education. But disruptive *ideas* operate on a different scale. Ideas that are truly disruptive destroy pre-conceived notions and dismantle previously-held theories, and open undiscovered avenues to new knowledge. In the process, they can permanently alter our comprehension of ourselves and our universe.

Consider the discovery of the double-helix. In 1953, James Watson and Francis Crick developed the idea that the structure of DNA looks like a twisted ladder. For years, scientists had struggled with the question of how DNA was structured and how it stored genetic information. The discovery of the double-helix solved the dilemma, and paved the way for the field of molecular biology. It gave us insights into the genetic code and how protein synthesis works. Decades later, it helped produce genetic engineering, rapid gene sequencing, and other techniques that became the foundation of biotechnology. This one idea changed our approach to the teaching of biology, and changed our view of disease and health.

We have many examples of disruptive ideas that led to transformational change in the human experience. We may think of the Internet as technology, but it began as a disruptive *idea*. And that one idea gave rise to all sorts of disruptive technologies that took the form of online products and services. But without the original *idea* — the ground-breaking idea of a global system of interconnected computer networks — the technologies never would have been created.

McKinsey & Company recently published a report on the disruptive technologies that will have the most radical effect on life, business, and the global economy in the years ahead. The list includes advanced robots with keen senses and human-like dexterity; next-generation genomics that will allow us to improve healthcare and agriculture; and better energy-storage devices that will improve the performance of electric cars and bring electricity to undeveloped parts of the world. These technologies will certainly have an impact, and who knows what other technological wonders the future holds? But the impact of these disruptive *technologies* cannot compare with the impact of the great, game-changing *ideas* in history.

The idea that the earth orbits the sun ... The idea of universal gravitation ... The idea that evolution occurs by natural selection ... The idea of democracy ... The idea of the unconscious, and the study of our own minds ... The idea behind the theory of relativity ... The idea behind the quantum theory the idea of a university.

Disruptive technologies have influenced human endeavor. Disruptive ideas have *transformed* the course of human history.

So, what does all of this have to do with the future of the liberal arts? I believe the future of the liberal arts is quite bright, and I believe this is true because liberal education and scholarly work in the liberal arts can give birth to these very sorts of ideas — ideas that become game-changers. A lot of disruptive ideas come from scientific inquiry, but great ideas can come from anywhere, including anywhere in the liberal arts. Many of the members of the American Philological Association are Classicists. So you know that many of the great disruptive ideas originated in ancient Greece and Rome, and you also know that the study of ancient civilizations and cultures can open our eyes to radical, game-changing ideas about our modern world today.

In spite of all this, critics continue to challenge the value of liberal arts education. Some of the uproar about the future of the liberal arts may stem from simple misunderstanding of what the liberal arts *are*. We often discuss the liberal arts in the context of the national focus on STEM disciplines. Some see this as an either/or discussion, as if STEM fields and the liberal arts were

mutually exclusive. Those who make this argument seem to forget that some STEM fields are, in fact, *essential parts* of the liberal arts. Let me share a story that illustrates this point.

When UVa's football team played in a bowl game a few years ago, we held an academic panel on the morning of the game for alumni and fans. One alumnus posed this question to the dean of our College of Arts and Sciences. "Given the national emphasis on the STEM disciplines," he said, "what do you think is the prospect for the liberal arts at UVa?"

Now, last time I checked, two of the fields covered by the STEM acronym — "S" for science and "M" for math — were essential parts of the liberal arts. Our dean pointed out that she was dean of both Arts *and* Sciences, and that our College of Arts and Sciences produces more STEM majors than any other school at UVa. About one-third of our students in Arts and Sciences graduate with majors (either single or double) in the sciences. This includes Psychology, which at UVa tends to be heavily neuroscience-oriented.

In Virginia, if we fail to teach the liberal arts, we are in fact breaking the law. Let me read you an excerpt from the Code of Virginia: "The following branches of learning shall be taught at the University: the Latin, Greek, Hebrew, French, Spanish, Italian, German, and Anglo-Saxon languages; the different branches of mathematics, pure and physical; natural philosophy, chemistry, mineralogy, including geology history, ideology, general grammar, ethics, rhetoric, and *belles lettres*; civil government, political economy, the law of nature and of nations and municipal law."

This directive was written into Virginia's statutory Code in 1919, and the subjects named by legislators then were nearly identical to Thomas Jefferson's original recommendations about the "branches of learning" that he wanted to be taught at the University he founded. He had laid out these recommendations in a planning report for UVa about 100 years earlier. We still teach many of these subjects today.

This continuity suggests that many of the fundamentals of knowledge have remained consistent over the years. But this isn't to say that universities don't need to adapt and refine their curricula to face 21st-century needs. One way that universities adapt is by pruning their curricula when training in some fields become unnecessary or obsolete. For example, at the University of Texas, I oversaw the shutting-down of the PhD program in zoology.

I have one final example of how disruptive technologies compare with disruptive ideas ... Next month, beginning on President's Day, UVa professor Peter Onuf, a leading scholar on Thomas Jefferson, will begin offering a six-week MOOC on the life of Jefferson and his ideas. About 2,500 people have already registered, and we are planning to translate the course into Spanish and Chinese. This is one of 11 MOOCs that UVa is offering this academic year through Coursera.

You can sign up to take the MOOC at coursera.org. If you do so, you will be just one of thousands of people around the world who will be learning about Thomas Jefferson's ideas online. Disruptive technology made this MOOC on Jefferson possible. But the disruptive power

of the technology behind the MOOC pales in comparison with the disruptive power of what the MOOC is about — Thomas Jefferson’s *ideas*.

When he was a young man, Jefferson had an idea for a new Republic based on a set of inalienable rights: life, liberty, and the pursuit of happiness. In an age of monarchy, this was a disruptive idea that promoted the power of the people through individual human rights and universal liberties.

Later in his life, Jefferson had an idea for a university that was radically different from other universities that existed at the time. Its curriculum, rather than focusing on religious doctrine and a few areas of specialization, would, in his words, “be based on the illimitable freedom of the human mind” ... another disruptive idea.

Jefferson’s disruptive idea about human rights gave birth to a new nation based on freedom and democracy. His ideas about education gave birth to new ways of learning.

Here’s my point: disruptive technology will allow this course on Thomas Jefferson to be transmitted to people all over the world. But the technology behind the MOOC is just a delivery system for disruptive *ideas* that altered the course of human history.

Measured side by side on the scale of significance, the *ideas* tower over the *technology*. Thank you.