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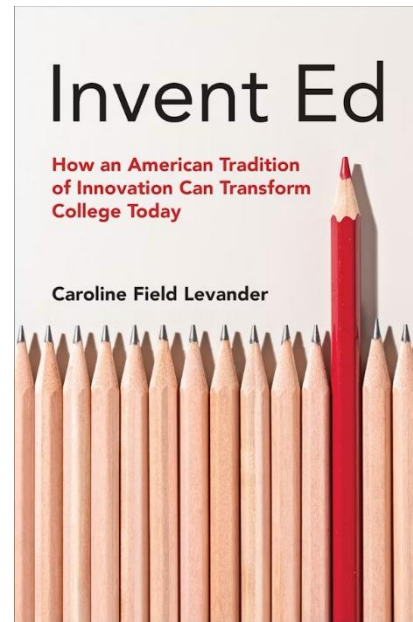
Levander, C. F. (2025). *Invent ed: How an American tradition of innovation can transform college today*. The MIT Press.

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It is no secret that higher education is at a hinge point in America. As the public increasingly questions the value of a college education, institutions are searching for ways to adapt. Author Caroline F. Levander begins *Invent Ed* with an impassioned argument for the importance of arts and humanities as a vehicle for such innovation. Using examples from American history, she highlights the role that combining the humanities with the sciences has played in the type of creativity and inventiveness that she argued is uniquely American. Through the stories of notable inventors such as Benjamin Franklin, Robert Fulton, and Nikola Tesla, she asserts that their interdisciplinary backgrounds were responsible for their success as scientists and inventors. Her statement in the introduction states her thesis well. “American invention, at its best, results from the adoption of radically different perspectives and the bringing together of widely divergent ways of thinking and knowledge bases” (p. 18). Levander’s book is a strong argument for taking a critical look at the way we structure college, through a lens of creativity and the importance of a cross-disciplinary perspective in this process.



As the Dean of General Studies at a midsize college, I am intrigued by Levander’s premise. We live in a time of skyrocketing tuition, political pressures, and an increasing number of alternative educational solutions. Public opinion of traditional educational institutions is waning, and many schools are responding by cutting programs that are seen as less employable, including the arts and humanities. The advent of Artificial Intelligence adds additional complexity to the mix, bringing fears of job insecurity and heightening the debate about the value of higher education. Ironically, instability within the entry level job market seems to bring us back to the value of a liberal arts education (Fisher, 2026).

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As a humanities professor, an expert on American culture, and the Vice President for Global Strategy at Rice University, Levander is well-placed to contribute to this discussion. She addresses a diverse audience of leaders in higher education, faculty members, and the general public, with her strong recommendations about the integration of the liberal arts throughout higher ed programs. Her arguments echo those made by David Epstein (2019) in *Range*. In a world of “wicked problems,” it is often the person who brings a broad, interdisciplinary perspective to the problem at hand, rather than a deep content specialist, that offers needed insight and finds truly innovative and creative solutions. This perspective, Levander argues, comes from education infused with the arts and humanities.

It follows that the first and largest portion of Levander’s book is dedicated to telling the story of multiple innovators in early American history. She makes connections between their interdisciplinary backgrounds and their ingenuity, implying that creativity, born of an arts and humanities background, is the mother of invention. In some cases, the connections between humanities and discovery are inherent in the stories. Samuel Morse created a prototype of the telegraph machine from his canvas stretcher; Nikola Tesla conceived of the AC motor after reciting Goethe’s poetry; and Robert Fulton, a painter and inventor, wanted his legacy to be of his invention across arts and sciences. In other cases, the connection between the arts and sciences is implied by the interdisciplinary background of the person. For example, stories of Benjamin Franklin, Thomas Paine, and others are compelling, although unsupported by mention of a direct causal link between realms of knowledge. In her narrative, Levander strikes a comparison between the conditions faced by early settlers in a vast new world, and the age we are now entering with unprecedented information availability. This profound analogy immerses the reader in the stories of early inventors who created solutions for unforeseen problems in a time of great expansion and change.

Leaving the history of American inventors, Levander dedicates the next part of her book to tracing the story of higher education through the lens of Snow’s (1959) two cultures paradigm. Guided by this lens, she asserts that science (one culture) has become the focus of technology and innovation, while arts and humanities have developed as a second, distinct culture. She explains that the institutions have become increasingly siloed, as specialization (especially within the STEM fields) has become more prevalent. This has led to the omission of arts and humanities from much of the STEM curriculum, leaving graduates unprepared to think creatively about today’s most difficult problems. Her argument rests on the multiple well-documented examples given in Part I, highlighting discoveries made by American inventors with backgrounds in the humanities. This compelling argument echoes current work on the benefits of arts integration (e.g., Bear & Skorton, 2019; Skorton, 2019). Despite referencing Skorton in her bibliography, Levander fails to establish interdisciplinary knowledge as a single driving force for ingenuity, either theoretically or empirically. This may be reflective of the broad audience she addresses in this book, but I found the omission troublesome. Her argument would benefit from a more robust connection to established theory or research in the field.

Throughout Part II, Levander employs the history of Harvard's development through the 19th and 20th centuries, to explore the two cultures within education. This, along with her call for innovation, is reminiscent of the argument made in Christensen and Eyring's (2011) *The Innovative University*. Like Christensen and Eyring, Levander asserts that institutions are at risk if they do not critically examine their structure and culture. Levander's focus is on the risk to individuals and to our nation if students do not learn to integrate creative thinking within scientific disciplines. This differs slightly from Christensen and Eyring's argument, which centers on the institutional risk of disruptive innovation. Levander also differs in her recommendations for change. While Christensen and Eyring lean into operational structures that change the cost model, increasing the number of students who can be served, Levander recommends that higher education leaders find ways to break down silos between disciplines at their institutions. This indicates what seems to be her overall goal: to improve the inventiveness of our college graduates by bolstering their creativity.

Levander's focus on student learning is one of the strengths of her book. Her intent, as echoed in her title, is to restore creativity to American inventiveness. Her focus on a liberal arts education, and especially the integration of arts, humanities, and STEM fields, is a breath of fresh air amid discussions of the value proposition of college education. Her recommendations are a welcome counterpart to discussions about AI, the changing job market, and the need for student agility.

The alignment between Levander's argument and her recommendations is generally clear. Her first recommendation, however, is centered on development of a growth mindset. This is somewhat of a surprise, given that little time had been given to this concept earlier in the book. Levander may have benefitted from shortening the narrative about early American inventors, in favor of a discussion about what types of attitudes and mental structures best support ingenuity. It would also have been nice to see her connect inventiveness and creativity to the holistic benefits of education that go beyond participation in the workforce. A liberal arts education is often considered valuable for the development of the whole person and investment in the community and society. Levander's position would strengthen this idea, but I found this perspective to be lacking in her narrative.

Overall, Levander's review of American ingenuity is remarkably thorough and presents a compelling argument for arts, humanities, and creativity. Her ideas are timely, and her suggestions are powerful. She brings a needed perspective into the national discussion about the value of higher education in a changing landscape. Most importantly, her recommendations about student learning are critical in an age that will surely be characterized by a need for great ingenuity.

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About the Reviewer

Denice Lingen is the Dean of General Studies and the former program chair of mathematics at Ensign College in Salt Lake City, Utah. She is also a PhD candidate at Utah State University in Logan, Utah, studying education, with a specialization in curriculum and instruction, and a concentration in mathematics education and leadership. Her research interests include teaching, learning, and student performance in mathematics courses at postsecondary institutions; online teaching and learning; the role of gender, race, socioeconomic status, and other environmental factors in mathematics learning; and the role of General Education in today's institutions. In her role as Dean of General Studies, Sister Lingen is responsible for implementing strategic initiatives, supporting and hiring full-time and adjunct faculty, and overseeing operational needs within General Education and Professional Services areas.



About the Author

Caroline Field Levander is Vice President and Carlson Chair in the Humanities at Rice University. She is the author of numerous books on American culture, has held leadership positions on Coursera, 2U/EdX, the Fulbright Association among others, and has led strategic growth and innovation across the industry. As Vice President for Global Strategy, she is responsible for expanding the university's global impact through the development of new degrees, academic programs, partnerships, and



research collaborations. She developed the university's first international hub, the Rice Global Paris Center, launched Rice Global India, and continually forges new partnerships with institutions including Venice International University and the Paris Brain Institute. Dr. Levander has been funded by the Rockefeller Foundation to lead an international summit on the Future Global University. Levander completed a 2017 Fulbright Research Fellow at the University of Exeter as well as a 2016 Senior Fellow at the Freie Universität Graduate School, Berlin.



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