



# Higher Education After Artificial Intelligence: An Invitation to a New Kind of Conversation About the Future

David Stone and Robert C. Scharff

This is the first of two essays the American Council on Education (ACE) has produced as an intentional effort to create space to imagine what higher education might look like well into the future. As these essays note, what it means to be “educated” has changed drastically over time and will continue to do so at an accelerated pace. ACE hopes that by addressing the long-term future of higher education now, we can help to build a better system for subsequent generations.

We invite readers who are interested in joining such a conversation to contact Lindsey Myers, director and principal program officer, Education Futures Lab, ACE, by emailing [lm Myers@acenet.edu](mailto:lm Myers@acenet.edu).

**David A. Stone** is vice president for research, professor of philosophy, and professor of public health at Oakland University. He has authored a number of papers on philosophical aspects of interdisciplinarity, and he is founder and president of The Institute for Transformational Education and Responsive Action in a Technoscientific Age (ITERATA).

**Robert C. Scharff** is professor of philosophy emeritus at the University of New Hampshire and executive director of ITERATA, a nonprofit institute for the study of interdisciplinarity in science, industry, and higher education. He is the author of *How History Matters to Philosophy: Reconsidering Philosophy's Past After Positivism* (Routledge, 2015), *Comte After Positivism* (Cambridge, 2002), and numerous papers on nineteenth- and twentieth-century positivism, postpositivism, and continental philosophy; co-editor with Val Dusek of *Philosophy of Technology: The Technological Condition: An Anthology, 2nd Edition* (Wiley-Blackwell, 2014); and former editor of *Continental Philosophy Review* (1994–2005).



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American Council on Education  
One Dupont Circle NW  
Washington, DC 20036

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## Introduction

Every day—in ways large and small—the higher education community reacts to the challenges it faces—enrollment, retention rates, cost, quality, credentialing, equity, social mobility, ad infinitum—or so it feels. Such reactions, which encompass everything from institutional policy change to strategic planning to large-scale, blue-ribbon panels of university leaders, experts, and diverse stakeholders, are absolutely necessary efforts to find new and better ways to support our students, our faculties, our institutions, and our society.

But reactions—however innovative and insightful—have a structure that limits what they can do. Reactions operate in real time and are formulated and enacted within a dominant framework of meaning. That framework guides how we as a community can describe and understand our situation, and it presently assumes that knowledge is only obtained empirically. It also guides how we structure what we value: what is good, what is bad, what constitutes a problem, and what the appropriate solution set looks like. Reaction operates within a given universe of “is and ought.” Efforts to address matters from outside that universe are often viewed as impractical, lacking in value, or worse—academic.

At the time of this writing, the higher education community is convulsed by the advent of large language model artificial intelligence (AI)—programs such as ChatGPT—and it is hard at work reacting to the immediate challenges that AI poses in and outside the classroom. How can we detect phony term papers? How can we make exams AI-proof? But many in our community recognize that AI—as well as or perhaps in combination with other significant challenges to the long-term future of higher education—calls for *something more* than reaction and incremental change can provide. The question becomes not, “How do we keep educating under adverse conditions?” but rather, “What does it mean to educate at all—let alone do so in the current ways that produce just these adverse conditions?” We will call that *something more* a response—not a once-and-for-all response but a collective community capacity to think and act responsively about ongoing challenges to higher education’s long-term future.

The purpose of this pair of essays is to outline what such a responsiveness would look like in the face of AI and other major challenges (think climate change, demographics, large-scale shifts in values) and to describe the contours of a community-driven responsive process—a different kind of conversation that can generate possibilities in thought and action necessary to support the large-scale changes that the next 50 to 100 years may require.

This effort will be made more difficult by two additional elements of our situation. First, our modern-meaning framework coalesces the forces of science, late-stage capitalism, and individualism into a particularly strident form of instrumental rationality and a tightly bound set of values around factors such as efficiency, optimization, growth, measurement, and outcomes; namely, all challenges can be formulated as well-formed problems, problems require solutions, and solutions must be practical, economical, and support existing societal and institutional goals. Recognizing this will be important in posing the very questions we hope to answer.

For example, if we ask, “What is higher education for?” we need to be prepared for how the word *for* is currently understood in a way that only permits a narrow range of instrumental answers that address functionality and instrumental value—higher education is *for* landing a good job, *for* being able to act as an active citizen, *for* achieving better life outcomes. This first difficulty is that where reaction can be thought of as empirical resistance and is something we do all the time, response must be thought of as ontological resistance, which puts in play not just our habits of thought but also our whole framework for thinking, and that is a far more demanding task. The second aspect of our current situation is that any conversation convened across the academy must take place around, through, against, and in spite of our proverbial disciplinary silos.

Already, programs such as Open AI's GPT-4o and Google's Gopher, LaMDA, and PaLM have created waves of reaction at the pedagogical level. How do we structure writing and coding assignments to prevent outright cheating and concerns about blatant plagiarism? How do we structure curriculum and learning outcomes so that ChatGPT doesn't become a substitute for the skills of organizing and presenting ideas that students need? How do we allow students to effectively integrate AI into their learning so they can incorporate the skills needed to take advantage of this technology without foregoing the intellectual and emotional growth that comes with a higher education? And, most recently, how do we counter the misinformation and disinformation generated by AI and address inherent biases built into the ways the systems are trained?

Higher education experienced similar waves as the calculator, personal computer, and cell phone arrived on campus, which has led some in our community to conclude that while the introduction of AI will be disruptive, we will adapt and find ways to mitigate its most toxic side effects. But for many in our community, AI is different. It poses both wider and deeper challenges.

Those focused on the wider concerns point to forecasts by McKinsey & Company and others suggesting that AI may radically transfigure the knowledge workforce. These forecasts suggest a wide range of occupations traditionally thought of as knowledge work—the kind of work that requires a higher education—in areas such as banking, finance, legal services, health care, pharmaceutical research and development, sales, marketing, education, and professional services will be ripe for AI-based automation. Others raise the specter that AI and other forms of automation may undermine labor markets altogether, forcing a consumer-driven capitalist economy to consider a universal basic income model in place of a wage model. In these contexts, they ask, “What societal role would higher education play?”

Those focused on the deeper challenges see universities as the preeminent source of knowledge production, knowledge dissemination, and epistemic authority in the modern world. For them, the threat posed by AI feels not just immediate and serious but also potentially existential for higher education. In this context, they ask, whither higher education at all?

But even for those who recognize these broader challenges, the instinct to react has already taken hold. Universities across the country are already exploring curricular changes to account for the impact of AI on job types and job skills, with some working to help students develop skills to work alongside AI technologies. Reactions by those who see a more existential threat are already visible in those critiques of AI as not producing *real* understanding. The certainty with which these reactions operate only serves to further highlight how significant of a step back will be required to develop a responsive way forward. In the rest of this essay, we will briefly frame what we mean by responsiveness—the basis for our different kind of conversation. In the second essay, we will outline in more detail how this new kind of conversation creates possibilities that can support the long-term future of higher education.

## Responsiveness

Prediction is hard, as Yogi Berra reminds us, especially about the future. But in any effort to think out 50 to 100 years, prediction—as we usually think about it—is only part of what is in play. Yes, one can think about the future in linear ways using trends and forecasts relying on existing forces; this is what reaction does. But one can only do this for as long as the existing dominant meaning framework holds—or, as Gerd Gigerenzer puts it, as long as one can maintain the stable world hypothesis (Gigerenzer 2022). To think about the future beyond that, it is important to remember that, as actors in history, we are always being exposed to both necessary causal feedback and effects of meaning; as we consider how we can plan for a time that moves out beyond the stable world, we can still have some voice in our future if we can stay receptive to marginal meanings at work within our dominant framework—which carry with them nascent possibilities—and focus those into responsive action.

The first step in developing responsive action is cultivating an awareness of marginal meanings. Think of marginal meanings as starting points that bring with them cultural and historical resonance that we can build on as we ask how the world can be otherwise. Responsiveness recognizes all of the ways in which human thought and action are already meaningfully embedded physically, socially, historically, and linguistically in life experience and mines those for currently unrecognized possibilities to guide future action. Here, we outline three ways in which responsiveness can draw out marginal meanings and nascent possibilities. Note, however, that these are not meant to be concepts in the usual sense of developing a framework but are instead intended to describe some ways in which the experience of marginal meanings can be explicated, clarified, and brought into play in future action.

## Experiential Self-Awareness

Marginal meaning can arise from the kind of experiential self-awareness that hews directly to the discomfort created when our usual approaches no longer provide what we feel the situation calls for. Eugene Gendlin gives the example of a poet stuck with an unfinished line who “*feels very exactly*” the absence of the word that is needed by all the other lines (Gendlin 1991). If necessary, the poet will eschew proper form, style, syntax, and convention, working against their own standard approach as they continue to work with the various words and phrases until they arrive at the felt-sense that the right one has come.

Our current culture encourages us to distrust this kind of self-awareness, because it can seem at first to be simply sensed or felt, and, running against the dominant approaches, it can appear irrational. Yet, this sort of precisely experiential functioning is no rare or mysterious occurrence known only to talented people like poets. All of us have had experiences in which “what one usually says” seems somehow unresponsive to what’s being lived through. In surfacing marginal meanings and practices, we will want to encourage this kind of self-awareness that trusts that attending to these discomfiting experiences can help us reconsider such larger issues as what it is to be “educated” at all—if we can learn to ask about the *very specific* ways in which they tell us about what is experientially discomfiting about our current practices.

## Taking Notice

While we have no access to the world that is not already meaningful, there are many ways we can take notice of how existing meanings are developed and how it might be possible to explore alternatives to the dominant framework. For example, faculty commonly employ a twentieth-century critical posture to explore with their students how existing meanings are historically embedded, socially constructed, or rely on one or another epistemological or ontological presupposition. Feminist and other critical thinkers have shown how meanings can be structured by deeply held assumptions that arise from patriarchal social arrangements or racially or economically driven power relationships.

In a recent article, David Gunkel showed how a common reaction to AI—that it does not create real knowledge because it doesn’t understand what it is saying—relies on deeply held Platonic assumptions about appearance and reality that have been importantly challenged over the past century (Coeckelbergh and Gunkel 2023). Part of being situated is having the capacity to discover and describe the various ways in which the meanings we rely on are embedded in our thoughts and expectations about things even before we reflect on them. And whether this is most visible in terms of Friedrich Nietzsche’s three kinds of history, Karl Marx’s false consciousness, Max Horkheimer and Theodor Adorno’s negative dialectics, Martin Heidegger’s *Gestell*, Michel Foucault’s biopower, Simone de Beauvoir’s second sex, Ibram X. Kendi’s *Stamped*, or Pope Francis’s technocratic paradigm, the point is that there are viable meanings and possibilities outside of the water we are so accustomed to swimming in.

Another approach to taking notice is to recognize how we are situated in and by our sciences, our professions, and our organizations. This is most clearly visible in the disciplines; disciplinary theories, methods, and methodologies use abstraction, formalization, functionalization, and mathematization (sometimes as quantification and sometimes by other means of creating measurability) to generate their objects of study.

In *The Structure of Scientific Revolutions*, Thomas S. Kuhn famously showed how these conceptual moves can become so embedded in scientific practices through training that it can be very difficult to communicate across disciplines even about the same object—or even within the same discipline across time—when the content produced by these moves differs (Kuhn 1962). Kuhn’s work also showed that even the most taken-for-granted assumptions such as Isaac Newton’s formalizations of time and space can be questioned, and methods—whether followed in the sciences, by professions, or in everyday work settings—can situate us in stable and reliable versions of reality that, nonetheless, could be otherwise. Discomfort about the influence of these stabilities on standard practices can be another source of marginal meanings and practices that can be noticed and carried forward.

## Retrieving

By understanding how we are situated historically, appreciating our history and our historicity, we can explore how aspects of our inheritance act both as obstacles to change and as sources of possibilities that can be retrieved and carried forward. And, in fact, there is an episode in the history of higher education that may be a valuable source of retrieval. In the eighteenth century, as the university shifted locus from the church to the state and as new forms of print made all manner of information widely available, university enrollment in Europe dropped dramatically under the growing belief that erudition—what it meant to be well educated—could be achieved simply by becoming well read and well informed. Does this sound familiar?

Calls were even made to abolish universities altogether. In the face of this challenge, leading thinkers of the time—particularly those in Germany—came together to develop a response that would return epistemic authority to the university and change what it meant to be educated. Chad Wellmon provides an excellent guide to this transformative period in higher education in his book, *Organizing Enlightenment*. There, as Wellmon has it:

Figures like Fichte and Schleiermacher turned to the university as the only technology capable of stepping into what they saw as a vacuum of authoritative sources of knowledge. They imagined that a newly conceived university could organize the fragmented forms of knowledge by forming young students into mature, disciplined scholars who could then filter through the excess of texts and distinguish real knowledge from the appearance of knowledge. (Wellmon 2016, 201)

This shift from the medieval university to the modern research university represents a response to changes that called into question what a university education was for, what roles the university played in society, and how the university needed to be organized. It changed the nature of the university from a repository of knowledge that produced erudite men of letters to a “community of knowledge that provided authority structures and models for how to think” (Wellmon 2016, 168).

In doing so, it changed disciplines from categories of knowledge into practices that formed students into science-minded thinkers, and it returned the university to the source of epistemic authority in a world newly awash in the knowledge made available by books. It also allowed universities to fill new roles society did not yet know it needed, as their students peopled the bureaucracies of the newly rising modern state and the management of the modern corporation, linked modern science to technological advance, and created the workforce that permitted compulsory elementary—and later, secondary—education to quickly become social norms (Wellmon 2016, *passim*).

A process of collective community response will recognize that this and other historical changes both created the world we take for granted (with all its norms, virtues, values, and practices) and now—in the form in which we inherit it—urges favoritism for the specifically techno-scientific lessons and possibilities that can be retrieved for future action. In the eighteenth century, the modern university raised the ontological question of what it meant

to be educated and determined that in an age of books it was no longer enough to be an information gatherer; one had to become an information processor. Now, however, as we face the prospect that AI can largely automate our method-driven information processing capacity, we find that—similar to Wilhelm von Humboldt—we too face the challenge of asking what it means to be educated. The idea of the modern university lives in us at least as much as an impediment to developing a more timely and responsive answer to this question as it provides general support for the understanding of education we already enact and find increasingly problematic.

We are all in conversations every day about how best to react to the challenges facing our institution for which we need to enact solutions tomorrow. We know how to have these conversations, and we look to organizations such as the American Council on Education, the Association of Public and Land-grant Universities, the American Association of State Colleges and Universities, and the National Association of Independent Colleges and Universities to support them in ways that make them efficient and effective.

A conversation about the 50- to 100-year future of higher education will need to be a new kind of conversation—one to which we are not accustomed and for which we are not well prepared. In the essay that follows, we will further develop what such a new kind of conversation calls for and how the three approaches described herein can be used to develop responsive thought and action in support of higher education's long-term future.

We invite readers who are interested in joining such a conversation to contact Lindsey Myers, director and principal program officer, Education Futures Lab, ACE, by emailing [lmyers@acenet.edu](mailto:lmyers@acenet.edu).

## References

- Coeckelbergh, Mark, and David J. Gunkel. 2023. "ChatGPT: Deconstructing the Debate and Moving It Forward." *AI & Society* (June 21). <https://doi.org/10.1007/s00146-023-01710-4>.
- Gendlin, Eugene T. 1991. "Language Beyond Patterns: Body, Language, and Situations." In *The Presence of Feeling in Thought*, edited by Bernard den Ouden and Marcia Moen, 21–151. New York: Peter Lang.
- Gigerenzer, Gerd. 2022. *How to Stay Smart in a Smart World: Why Human Intelligence Still Beats Algorithms*. Cambridge, MA: MIT Press.
- Kuhn, Thomas. 1962. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press.
- Wellmon, Chad. 2016. *Organizing Enlightenment: Information Overload and the Invention of the Modern Research University*. Baltimore: Johns Hopkins University Press.



